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ABSTRACT

This paper examines the last 2 decades of basic education reform in Chile with an emphasis on institutional and political dimensions. Chapter 1 centers on how the government has reoriented the formal and informal rules and incentives governing the behavior of teachers, parents, and administrators in an effort to produce greater system efficacy and improved student achievement. In Chapter 2, attention turns to the impact and outcomes that institutional changes and pedagogical innovations have had on the education system, particularly in regard to quality, equity, and efficiency. Chapter 3 highlights lessons from Chile's experience that are relevant for policymakers and education development specialists in other countries. The main findings of this report are that the Chilean reform process of the 1990s is unique in combining elements of different educational models; that full-fledged, sustainable reform involves linking what happens in the school and classroom with the rest of the educational system; and that implementing a complex reform, such as the 1996 Full School Day initiative, requires changing both formal and informal educational rules and structures, as well as culture. An annex contains tables of student test scores and educational finance statistics. (Contains 95 references.) (RT)

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Education Reforms in Chile, 1980-98:
A Lesson in Pragmatism

Françoise Delannoy

Vol. I – No. 1 – June 2000

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Table of Contents

About the Author	III
Acknowledgements	V
Acronyms	VII
Introduction	1
Overview	1
Chapter 1. Twenty Years of Education Reform	7
Market-oriented Reform: Top-down, Big-bang System Change (1980-90)	7
Promoting Equity and Quality in the Early 1990s: Bottom-up Cultural Change	13
From Incremental Change to Full-scale Reform: Linking Top-down and Bottom-up	24
Chapter 2. Reform Impact and Underlying Factors	39
Quality: All Children Are Learning More	39
Equity: Despite Progress, Still a Frustrated Commitment	43
Chapter 3. How Do Chilean Educational Reforms Compare With Those of Other Countries?	53
Choice and Demand-side Financing	53
Decentralization and Accountability	55
Chapter 4. Lessons from the Chilean Experience	61
Successes	61
Conclusion	71
Annex	73
References	75
Bibliography	77

About the Author

Françoise Delannoy, an Education Specialist at the World Bank, has worked extensively on reforms in Latin America, Africa and East Asia. Prior to joining the World Bank, Ms. Delannoy taught at the secondary and tertiary levels in France and in the United States. In 1996 she was seconded to the Chilean Ministry of Education to support the launching of the Full School Day reform. She is currently working on teacher issues in the Latin American and Caribbean Region of the World Bank.

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On a more personal level, I wish to thank my friends and family for their unflinching affection and love. My secondment to Chile has been a great learning experience and the writing of this paper, an exciting intellectual voyage. May it contribute, modestly, to making the rich and complex Chilean experience accessible to other World Bank clients. I dedicate it to the students of Chile, to

their teachers, and to all those who pragmatically put the interest, welfare and learning of these children ahead of any philosophical preferences.

Según como sea la escuela, así será la Nación entera. – Gabriela Mistral

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Acronyms

CASEN	National Household Survey
DAEM	Municipal Departments of Education
FIDE	Federation of Private Education Providers
FPPS	Fully Paid Private Schools
FSD	Full School Day
GDP	Gross Domestic Product
GPT	Teachers' Professional Groups
LOCE	Constitutional Law on Education
MINEDUC	Ministry of Education
NGOs	Non-governmental Organizations
OECD	Organisation for Economic Co-operation and Development
PAA	University Admission Test
PADEM	Annual Plans for Municipal Education Development
PER	Performance Evaluation Report
PME	School-based Improvement Plans
PUC	Pontifica Catholic University
SIMCE	System for the Measurement of Educational Quality
SNED	System of Merit Awards to Schools
TIMSS	Third International Math and Science Study
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNESCO/OREALC	Oficina Regional de educacion de la UNESCO para America Latina y el Caribe

Introduction

In 1980 Chile's military government (1973-90) launched a profound, market-based, education reform. Its objective was to promote greater efficiency through administrative decentralization, capitation-based financing, labor deregulation and open competition between public and privately administered schools. Ten years later, the first government of the democratic transition adopted a new education strategy aimed at reorienting public investment toward greater quality and equity while maintaining most of the previous administrative and funding framework. This focus has been sustained and deepened in recent years through the introduction of the Full School Day (FSD) reform in 1996. These reforms,¹ all recognized as cutting-edge at the time they were adopted, are being implemented in a country which, while at the doorstep of the OECD, is still in many ways, a traditional, highly structured and inequitable society.

The reform waves of the 1990s are interesting not only in the vision and persistence of the country's education policymakers, but also in the unflinching and growing political support they have mobilized from the top levels of the democratic coalition government. Today, education is—and is presented as—the Chilean government's top priority, a cornerstone of the nation's development aspirations to fight poverty and to improve income distribution. By consolidating and formalizing the process of change begun in 1990 into the FSD reform, Eduardo Frei positioned himself as "The Education President," partially tying the fate of his center-left coalition to success in education.

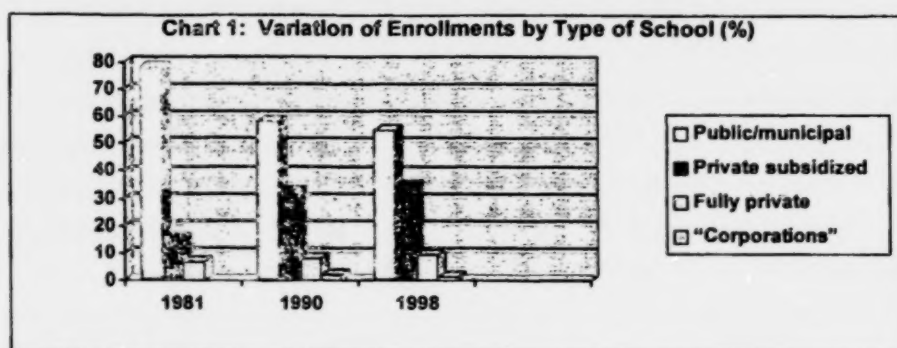
Overview

Chile's basic education system comprises eight years of primary school (compulsory) plus four years of secondary school (non-compulsory). The average number of years of formal education is 9.7.²

By comparison with other middle-income countries, Chile is at a relatively advanced stage of educational development: universal coverage was practically achieved in the mid-1960s in basic education; the enrollment ratio³ today is 30.3 percent for pre-school, 87 percent in secondary education and 26 percent in tertiary education.

¹ To avoid confusion, each phase of change or reform discussed will be dated or otherwise qualified: (1) the 1980 pro-market reforms; (2) "the change process" of 1990-96; and (3) the 1996 FSD reform. The Chilean authorities only distinguish two waves of reform—the 1980s and the 1990s—with phases two and three forming a continuum.

² CASEN (Household survey) 1998.



Source: Division of Planning and Budget, MINEDUC.

Note: Public schools were transferred to municipal governments over the 1981/86 period, with a slowdown due to the fiscal crisis. The "corporaciones," created in 1987, are technical/vocational schools managed by industrial firms. Percentages have been rounded and may not add up.

The Chilean education system features a high degree of private sector participation. Out of a total 10,600 schools (1998), parents have the option of placing their children in (a) public schools managed since 1980 by the municipalities (55.1 percent of 1998 enrollment); (b) private schools subsidized by the government on the basis of enrollment (34.1 percent); (c) fully private schools (9.2 percent); and (d) private technical-vocational schools run by private businesses or corporations (1.5 percent) (Ministry of Education 1998).

Since 1990 the Chilean government has considered education as a priority and has significantly increased its funding for the sector. In 1997 real public spending on education was equivalent to 160 percent of the 1982 level, up from 73 percent in 1990. In 1997 total education spending equaled 6.4 percent of GDP, with public spending on education accounting for 3.5 percent of GDP. This compares favorably with most OECD countries.

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Public Spending on Education/GDP	2.6	2.7	2.9	3.0	3.1	3.1	3.4	3.5	3.9
Private Spending on Education/GDP	2.0	2.0	2.2	2.4	2.5	2.5	2.8	2.9	3.1
Total Spending on Education/GDP	4.6	4.7	5.1	5.4	5.6	5.6	6.2	6.4	7.0

Source: Division of Planning and Budget, MINEDUC.

³ Chilean statistics refer to "coverage" and do not distinguish between gross and net enrollment ratios. Overage is not a problem in Chile.

Analytical Framework

This paper identifies in the period under review (1980-1998) three overlapping cycles of reform in education:

- During the 1980s the military government introduced market-oriented reforms, relying mainly on formal rules such as mandates and structural change. Responsibility for school management was decentralized to municipal governments and a system of capitation grants allowed parental choice of public or private schools. But these sweeping changes in system governance were not accompanied by public information or consultation to gain acceptance, by training to create the necessary capacity, or by resources to induce the desired behavioral changes.
- While the democratic center-left coalition governments of the 1990s have introduced some changes in formal rules (e.g., the 1991 Teacher Statute), this was not their main strategy. The approach introduced by the administrations of Patricio Aylwin⁴ during 1990-94 and Eduardo Frei during 1994-99 aimed at creating a new culture of school autonomy by relying more on incremental changes in informal rules, behaviors, values and inducements through training, technical assistance, symbolic and economic rewards, and improvements in teachers' social status. The risk was that this "change" at the school level might not have gone to scale.
- The Full School Day⁵ initiative announced by President Frei in May 1996 has pulled a collection of loosely articulated modernization packages into a cohesive reform. It also generated social demand for greater impact, efficiency and sustainability for which the Ministry of Education and the system were not fully prepared. The challenge today is modernizing the ministry and other sectoral agencies so as to institutionalize the new school culture (i.e., deepening it and bringing it to scale), while simultaneously responding to evolving societal expectations. Institutional modernization is essential in order to maximize benefits from nearly a decade of growing public investment in human capital.

The Chilean story offers insight into how one education system has struggled to achieve internal consistency and effectiveness within the context of significant political and economic transition. The government has attempted to reconcile the market-based strategies of the military era with its democratic concerns that all Chileans be equipped to participate in the country's economic and social development. The process of integration has fueled remarkable innovation tempered by the

⁴ The first democratically elected president after the Pinochet government, Patricio Aylwin was a Christian Democrat, as was his successor, Eduardo Frei, Jr. In January 2000, Ricardo Lagos (a socialist) was elected to succeed Frei.

cautiousness of an industrializing country still seeking social cohesion. Thus, within the Chilean education system one finds both much that is cutting edge and some that is highly traditional. The result is a fascinating experiment in social engineering and educational change.

Table II: Chile's Education Reform Cycles			
Period	1980s	1990-96	1996 on
Direction	Top-down	Mainly Bottom-up	Integrating "macro" structures with "micro" school culture
Preferred Tools	Formal Rules, Mandates	Informal Rules, Incentives	Accountability & information infrastructure
Objective	Efficiency	Quality and Equity	Improved performance across all dimensions
Focus	System Structure	School Culture	Modern Institutions

This paper examines two decades of basic education reform in Chile,⁶ with an emphasis on institutional and political dimensions. Chapter 1 centers on how the government has reoriented the formal and informal rules and incentives governing the behavior of teachers, parents and administrators in an effort to produce first, greater system efficiency, and later, better learning outcomes among students. These institutional changes were introduced through a combination of policy instruments such as mandates, inducements, capacity-building and system reform. Chapter 1 also discusses the politics of education reform in Chile. In doing so, it examines the main stakeholders at each reform stage, their positions and actions vis-à-vis the reform and how their actions impacted reform outcomes.

In Chapter 2, attention turns to the impact and outcomes that institutional changes and pedagogical innovations have had on the education system particularly in regard to quality, equity, and efficiency. This section discusses where policy interventions—alone or in combination—appear to have been most effective. Chapter 3 highlights lessons from Chile's experience that are relevant for policymakers and education development specialists in other countries.

The main findings of this report are threefold. First, the Chilean reform process of the 1990s is fairly unique in combining elements of different educational models such as (1) a vertical administrative and financial framework with an open and horizontal network-based pedagogy strategy; and (2) efforts to reconcile a market approach with a concern for equity and solidarity. The strength of market policies is that they focus attention on results. However, in a still developing context, efficiency and structural reforms by themselves may not suffice to raise quality or equity, or may take too long to achieve the desired impact. Boosting student learning requires detailed attention to

⁵ The FSD reform aims at eliminating double-shift schools by 2002. By 1998 the FSD had been adopted by about 50 percent of government-subsidized schools, amounting to 18 percent of total student enrollment.

⁶ The paper does not discuss the formal and informal initiatives introduced in pre-school, or the reform of higher education introduced in 1998.

school and classroom processes. Improving equity requires targeted approaches to protect the vulnerable.

Second, shifting gears from mere educational change (1990-1996) to a full-fledged sustainable reform (i.e., FSD reform) requires linking the micro culture of the school/classroom with the macro level (i.e., system). This is needed to ensure that individual schools demand enough of their students and serve national as well as local educational goals; and conversely, that the system provides schools and parents with the guidance and support they need. This requires integrating fragmented structures and programs, and creating institutions/organizations that promote autonomy (clear rules of the game), but balance it with accountability mechanisms (e.g., voice, choice, exit, standards, assessment, M&E) and learning (research, information and communication, training).

Third, implementing an educational reform as complex and ambitious as the 1996 Full School Day initiative requires changing both formal and informal rules, structures as well as culture. The move to a single shift—with its major physical and organizational planning implications—and the introduction of a new curriculum—with its formidable teacher training requirements—strained the system, already stretched by a multiplicity of programs and innovations. The challenge is to work differently—in teams, partnerships and networks; learning to be selective; reaching to the outside world to confront challenges and get new ideas; and demanding support from the system while being accountable to it for results.

Twenty Years of Education Reform

Market-oriented Reform: Top-down, Big-bang System Change (1980-90)

Context

In the late 1960s the government of Eduardo Frei, Sr., had practically universalized primary education (by introducing double-shifts) and replaced it with an 8 year basic education cycle. It simultaneously expanded secondary and higher education, modernized the curriculum and improved teacher training. At the beginning of the 1970s the government of Salvador Allende, a socialist, undertook to broaden educational opportunities and to launch a curricular and institutional reform reflecting socialist political and cultural beliefs. This reform was never implemented due to the acute socio-political conflict which erupted in 1973.

The military coup of 1973 marked a radical departure for Chile in many respects. Called upon by political centrists and conservatives to restore order amidst the economic and social crisis generated by the socialist experiment of President Allende, the military government soon undertook a far more ambitious effort to reshape Chilean society. The country's longstanding democratic tradition came to an end as General Pinochet moved quickly to suppress any opposition and consolidate the military's political control. Soon thereafter, the regime launched a radical neo-liberal agenda for restructuring the state-led economy. By the end of the decade, the military government had crafted a comprehensive "modernization" program across seven areas, including labor policy, education and regional decentralization. Officially, these "New Order" reforms were driven by efficiency concerns: the search for greater responsiveness to local needs through market mechanisms. However, there also was a strong unofficial agenda—de-politicizing Chilean society by fragmenting organized labor and limiting its power. All these events unfolded against the backdrop of a severe fiscal crisis (1982-85) which slowed down some reforms (such as the "municipalization" of the school system as will be seen below) and forced government spending reductions, particularly in the social sectors. By the late 1980s, however, a drastic program of market reforms had restored fiscal stability and put the economy on a stellar growth path (7 percent per year during 1987-97).

Core Education Initiatives

Focusing on legal and structural change, the reforms introduced by the military government turned Chile into a laboratory for "Chicago economics" in a context of power consolidation. The role of the state was redefined from all-knowing and encompassing (the "Estado docente" or "teacher State") to subsidiary (i.e., "the rights of private agents ought to supersede the state's prerogatives whenever possible"). The following initiatives were enacted during this period:

- **Decentralization:** administration of primary and secondary schools was transferred to the more than 300 municipalities. Local governments were given responsibility for contracting, hiring and firing teachers, and for maintaining infrastructure, while the central ministry retained its regulatory, quality assurance and curriculum setting functions.
- **Finance:** the government introduced a system of school financing based on average monthly student attendance (i.e., capitation grants⁷) to both publicly and privately managed schools.
- **Competition:** privately administered schools were encouraged to compete with public schools for student enrollments. In addition, industrial groups (e.g., agriculture, forestry and mining) were given incentives to manage technical/vocational schools. Students and parents were permitted to seek matriculation at any subsidized school, irrespective of location.
- **Labor Deregulation:** teachers were stripped of their special civil servant status and made subject to private sector labor laws which allowed for local determination of wages and prohibited labor action.
- **Student Assessment:** in 1988 the government introduced the SIMCE, Sistema de Medicion de la Calidad de la Educacion (System for the Measurement of Educational Quality). Developed in collaboration with the Catholic University and based on an earlier pilot in 1981, SIMCE was a groundbreaking effort to provide student achievement data on a national scale.

Table 1.1: The SIMCE Story

A prerequisite for a market approach to education is a good assessment system which provides parents with timely, objective, reliable and relevant information on student achievement as a basis for school choice and accountability. Following protracted negotiations between the MINEDUC and the Pontifica Catholic University (PUC) an assessment system was introduced in 1981 under the name of Performance Evaluation Program (PER). Suspended in 1984 due to cost concerns and for lack of consensus on managerial responsibility, it was reinstated in 1988 under the name of SIMCE. In 1990 the focus in the use of SIMCE results shifted from comparison between types of schools to stimulate competition to correcting inequities through targeting. In 1990 the management of SIMCE was fully transferred to MINEDUC, a decision criticized by some who feared a lack of objectivity.

Today's SIMCE is administered alternately to 4th and 8th graders (the grades marking the end of two sub-cycles). The entire cohort is tested in Spanish, mathematics, student self-image and perceptions. In 10 per-

⁷ It may be useful to clarify the concepts of capitation grants and vouchers. In theory, the former are paid to schools and the latter directly to students. In practice (and by contrast with, say, scholarships), payments are almost never made to families under either system. In this document, both terms are used interchangeably.

cent of the schools, tests also are administered in natural science, history and geography. Since 1988, 10th graders have been tested three times (1993, 1994 and 1998) in Spanish and mathematics. SIMCE results are used as inputs into school performance evaluations (SNED⁸). Its strategic meaning for teachers makes issues of legitimacy important. The test provides helpful insights for the revision of the university admission test (PAA).

SIMCE is widely supported by the public. Its development and implementation have allowed the forming of an interdisciplinary team combining staff from the ministry, PUC and consultants. Its use by supervisors and teachers has become more systematic as its reports have become simpler, more user-friendly and more rapidly produced. SIMCE has served as a diagnostic instrument to prepare the new curriculum and pedagogical material. It has been given increasing national publicity, and its cost has remained under US\$5 per student. The indicators being monitored now include percentages of correct answers and students reaching the target level of 70 percent.

SIMCE has had its share of problems, however. For many years, teachers blocked the publication of school results, depriving the authorities of a key instrument of market policy. The public release of school-level results only began in 1995. Only in recent years (1996) has the comparability of the tests from one year to the next been ensured through the technique known as equating, making it difficult to evaluate changes in schools' performance during the 1980s and early 1990s. The practice of testing 4th graders one year and 8th graders the next does not permit following up the same cohort to monitor the impact of remedial actions. SIMCE has features of a low-stakes test (for the students) but has high stakes for the schools—because of its weight in the SNED since 1995. Some observers assert that this has led to perverse behaviors such as directors under-reporting the socioeconomic status of their students to inflate the school's value-added, or asking weak performers to stay home on the day of the test to maintain a high average score. Some analysts have suggested separating more clearly the school accountability function, which requires a census base, from the system assessment function, which could be sample-based. Others have questioned the independence of the SIMCE since it was absorbed into the ministry.

Despite these critiques, over the years SIMCE has gained wide acceptance. It remains a pioneer and one of the more technically advanced and influential student assessment systems in Latin America. The MINEDUC is continuing to refine it further in order to address the above issues, test the higher-order and problem-solving skills emphasized by the new curriculum and better measure other factors such as student, family and school characteristics.

Implementation Strategies and Politics

Throughout the military period, reform implementation largely took the form of legal mandates and political coercion. Given its tight control of the political arena, the government did not have to seek public consensus or the support of key education stakeholders. The weakening of the national teachers' union and repression of dissident teachers eliminated a traditionally powerful stakeholder. Municipal governments, a key actor in the decentralization scheme, were institutionally weak and politically compliant. Parental voice was only possible through official channels in parents' centers. As a result, the sweeping sectoral changes introduced in the early 1980s were designed by central technocrats with little input from implementers.

⁸ See discussion of SNED on pp. 22-23.

Major Outcomes

Education Enrollments

During the military period, primary enrollments continued at near-universal levels, while secondary and tertiary enrollment increased sharply.

Table 1.2: Net Enrollment Ratios				
Year	Pre-school	(Basic) Primary	Secondary	Tertiary
1960	2	80	14	4
1970	4	93	50	9
1980	12	95	65	11
1990	18	95	78	20
1992	—	98	80	—
1997	30 (1996)	—	87	28 (1995)

Source: Planning and Budget Division, MINEDUC
Full series not available for recent years

The dropout rate registered a sharp decline—from 8.0 percent in 1981 to 2.7 percent in 1982 for basic education and has continued its overall decline since to reach 1.6 percent in 1997. Improvement in the dropout rate has been slower in secondary education—from 8.3 percent in 1981 to 6.2 percent in 1982 and 5.8 percent in 1997 (see Annex Table C).

Decentralization

While conceptually and politically ambitious, the government's "municipalization" policy—which was temporarily suspended during the fiscal crisis—remained incomplete in several important respects:

- The fact that municipal mayors were appointed centrally undercut the ostensible objective of introducing greater community "voice." Given the political landscape, most parents and teachers were unwilling to challenge the competence and authority of school principals, who sometimes were military personnel. This was compounded by the fact that chairmen of parents' centers were not freely elected but appointed by a national coordinator.⁹
- Transferring school administration to municipal governments, while leaving the responsibility for pedagogical aspects to the ministry and its province-based supervisors, left schools dependent upon two largely disconnected chains of authority. The responsibility for infrastructure decisions was placed at the regional level. This created for the schools a conflicting govern-

⁹ This practice, although later abandoned, has had a lasting impact on the *modus operandi* of these centers, slowing down their development as effective participation channels and accountability mechanisms.

ance structure, with long-lasting effects. Overall, the system suffered (and continues to suffer) from a lack of articulation of responsibility among various levels of administration; and

- Exacerbated by a long tradition of political centralization, municipal governments assumed responsibility for school administration with relatively little capacity and limited information. The central government did not provide municipal administrators with training or adequate resources; this marked the genesis of fiscal deficits in municipal budgets which were to be particularly devastating for poorer municipalities.

Public Spending for Education

The distribution of public spending improved in favor of pre-school and primary education (from 57 to 78 percent of the total during the decade), due to the introduction of cost recovery in higher education and an explicit reallocation of spending to basic and pre-school education. However, **total** education spending fell sharply during the period, initially due to the fiscal crisis and subsequently as a matter of policy. Between 1982 and 1990, ministerial spending declined by 27 percent in real terms, the capitation grant, the main source of funding under the new decentralized system, by 25 percent, and teacher salaries by 20 to 40 percent.

Competition

The capitation grants paid to schools on the basis of attendance acted as a powerful incentive for schools to develop strategies to improve student retention. Sharp competition from private providers developed relatively quickly. The opening of the system stimulated a proliferation of private-subsidized schools (from 1,700 to 2,700 in 6 years). As a result Chile was able to smoothly absorb the pressure for secondary school expansion which resulted from the achievement of universal primary enrollment in the mid-1960s. There was a major shift of students to the private subsidized sector, whose enrollment grew by 93 percent between 1980 and 1985, while the municipal system (public sector) lost some 344,000 students (see Chart 1). The private sector growth occurred overwhelmingly in the principal urban areas.

Deregulation of the Teacher Labor Market

With the decentralization, teachers became municipal or private employees subject to locally determined salary and working conditions. The deregulation weakened the 90,000 member national teachers' union. Although the union was formally replaced by an educator's association, teachers lost control over national education policy and were faced with a fragmented, uncertain labor market.

Evaluation of Student Performance

Although initially intended to inform parental choice regarding school quality, SIMCE results were not distributed to schools during this period. This was due in part to resistance from teachers and in part to the concern among the political right that unfavorable SIMCE scores would be damaging in the 1988 plebiscite and 1990 general election. Data that were published were aggregated by types of school, fueling criticism that they were being used more for ideological purposes to document the superiority of private subsidized schools than to promote school improvement.

With the decline in public spending on education, especially salaries, the absence of targeted mechanisms to make it economically attractive to serve special needs, disadvantaged, or rural students in a competitive environment, and teachers demoralized by the abrupt change in their status, the segment of the education system attending to the most vulnerable children deteriorated. Various evaluations conducted at the beginning of the 1990s showed that:

- 40 percent of 4th graders from the poorest half of the population could not understand what they were reading;
- the repetition rate averaged 7.8 percent for basic and 12 percent for secondary education;
- the time required to complete the school cycles was 10.3 years for the 8 years of basic education and 5.4 years for the 4 years of secondary education; and,
- net secondary enrollment ratios were 96.7 percent for the richest quintile, but only 73.6 percent for the poorest quintile.

Legacy of the Reform

The military government should be credited for having established the foundations of a universal capitation grant system which has endured and been continuously improved since. However, its autocratic and repressive methods alienated the education establishment. The dramatic events of the 1980s left teachers traumatized and the nation even more sharply divided than in 1973. The atmosphere of fear reinforced silo-thinking and generated lasting distrust between government and teachers. This led to mediocre implementation as the key actors—the teachers—not only did not “own” the reforms, but rejected them both in substance and style.

The strategy of the 1980s was simple: to change the system by relying almost exclusively on mandates and applying textbook market principles. It provided autonomy, not in municipal management, as mayors were appointed by the center, but in the form of school choice for parents and curricular flexibility for schools. It created exit options for parents through the capitation grant system, but no real voice mechanism. The main accountability instruments were the physical control

of student attendance and the monitoring of SIMCE results. The reform focused on macro levers rather than the micro social processes occurring in schools and classrooms, the locus of educational change. In line with the government's market philosophy, the new decentralized responsibilities were not defined in detail. However, the principle that "one learns by practicing" assumes a degree of capacity which was not present at the local levels. Whether by design or oversight, the absence of teacher training and capacity-building activities to prepare the municipal authorities for their new roles is striking. Assessment results were not made available to parents to guide their choices, or serve as a tool for schools or the system to learn and correct their deficiencies. The reform fragmented governance,¹⁰ which subsequently was to become a major impediment to improving quality.

The transition period between the 1988 plebiscite, which put an end to the military regime (55 percent of "no" votes), and its actual stepping down in 1990 was marked by intense negotiation of the terms of peaceful cohabitation between the armed forces and the democrats. On its last day in office (March 10, 1990), the Pinochet government passed a Constitutional Law on Education (LOCE) designed to "lock up" its reforms by making any amendment subject to a political quorum, which was and remains largely unattainable.

Promoting Equity and Quality in the Early 1990s: Bottom-up Cultural Change

Context

After two decades of political polarization and radical institutional change, in 1990 the Chilean people were eager for reconciliation and moderation. From the outset, the newly-elected center-left coalition adopted a new political paradigm: "Continuity with Change." The government's promise was to reconcile the inherited market policies which successfully had extracted the country from the fiscal crisis of the mid-1980s with a concern for greater equity and solidarity, all under a modern state.

At the beginning of the period, concerns other than education, such as the transition to democracy, the ability of the multiparty coalition to govern effectively, and its capacity to maintain fiscal, monetary and financial discipline in the face of legitimate as well as populist demands in the social sectors, ranked much higher in the public agenda.

¹⁰ The schools report to the Municipal Departments of Education (DAEM) (or to semi-autonomous Municipal Management Corporations) for administrative and financial matters, and to the de-concentrated Provincial Departments (DEPROV) for pedagogical matters. But a growing number of DAEMs are increasingly involved in educational processes as well.

During the transition, the education sector benefited from the multiplicity of independent research outfits that had continued to function throughout the 1980s. These organizations, funded by foreign sources with high quality standards, had become the centers of intellectual opposition to the regime and had had a decade to think about a model that would integrate research findings and transcend the "welfare versus neo-liberal" view of the state. The Ministry of Education absorbed some of these researchers into its leadership to prepare its second round of education reforms.

New Focus and New Definitions

Working with his new team, Education Minister Lagos,¹¹ a socialist, understood the importance of education for a modern state, and the need to transcend the theme of access (already universalized in basic education). With the restoration of democracy, the government's strategy was reoriented towards equity and quality. However, in anticipation of XXI century "information age," both concepts were redefined by the ministry:

- Equity did not refer to the delivery of a homogeneous package of educational goods and services, but meant attending to the needs of an increasingly diverse school population and targeting compensatory support to the most vulnerable in pursuit of equal educational opportunity.
- Quality no longer meant the accumulation of factual knowledge, but the mastery of higher-order skills (critical thinking, abstract reasoning, information-processing, communicating), attitudes (teamwork, autonomy, adaptability) and values (tolerance, solidarity). These skills were seen as essential for all Chileans to live in a democratic society and compete globally, as well as for the poor to be able to take advantage of the opportunities offered by a market economy.

Operationally, the concepts of equity and quality were translated as follows:

Level	Quality	Equity
Policy	Competitively funded school-based projects	Targeting the poorest 10 percent and rural multi-grade schools
Supervision	Whole school, "integral"	Focused on lowest-performing schools
School	Teamwork; reaching out to community	Inclusion of all children
Classroom	Curricular & pedagogical flexibility	Individualized attention to students' needs

Source: J.E. Huidobro, 1997

¹¹ Ricardo Lagos was elected President of Chile in January 2000.

This change of strategy was accompanied by a new *modus operandi* based on the following guiding principles (Cox 1998):

- the center of attention moved towards processes and results;
- the system was to be regulated not through bureaucratic rules, but mainly through support, incentives, and the use of evaluation and information;
- the functioning of organizations, hitherto closed and inward looking, was to become more open and network-based;
- the implementation model was no longer a top-down blueprint but a bottom-up, experiential and incremental process adapted to local needs; and
- sectoral development was to cease being driven by local pressures and interests and instead to follow a national strategic vision.

Building on school-based innovation and experimentation centered on pedagogical processes, the main strategy was to encourage the emergence of a new culture relying mainly on changes in informal rules and inducements. This process established the intellectual, technical and experimental foundations for the full-fledged reform which was to come in 1996. Of course, deeply ingrained cultural biases such as a centralized control and a process (rather than results) orientation would prove difficult to modify.

Core Education Initiatives

To promote equity and quality, the new democratic government took the following policy initiatives:

- **Equity:** the government took significant steps to target resources toward low-income communities and children. Some additional funding and strong pedagogic support initiatives were designed specifically for rural students and the poorest 10 percent of the primary school population (the "P-900" program), and all vulnerable children became eligible for school feeding.
- **Quality:** improving overall educational quality was seen by the government as the cornerstone of future economic growth, poverty alleviation and social cohesion. Considerable attention and resources were devoted to enriching the classroom environment, as well as to "micro-level" school-based planning and improvement strategies, teacher networks, in-service training, and information technology for students. This was to be referred to as "upgrading the (football) field from mud to turf."

- **Greater transparency:** the government's use of SIMCE and other evaluation data became more open, with assessment results increasingly shared with the public. As data became more reliable, performance scores began to be linked with resource allocation.
- **Fiscal Priority:** as education emerged as a political centerpiece for the democratic coalition, increasing state resources were invested in the sector. The share of private funding for education also grew, reflecting the philosophy of mixed public/private financing to broaden the resource base for education by tapping the willingness to pay of the more affluent.¹²
- **New Teachers' Statute:** In 1991 the government and the teachers' union agreed upon a new legal framework, which largely reversed the labor policies of the Pinochet era. As a result, teachers were assured of tenure and centrally negotiated wages. The law was accompanied by a significant pay increase (125 percent in real terms between 1990-1998).

Focus on the Classroom

Accustomed to traditional teaching methods, starved of basic resources, and antagonized by the treatment given to teachers during the 1980s, the school system was not immediately ready, technically or psychologically, for pedagogical innovations. Therefore, the MINEDUC strategy concentrated on the schools and classrooms, improving their material conditions and giving them gradual exposure to new processes. At their core, these processes sought to cultivate a greater sense of school autonomy and a commitment to "meaningful learning for all" regardless of student background.

The government's initiatives to improve equity and quality were channeled through two innovative programs supported by the World Bank: *Mejoramiento de la Equidad y de la Calidad de la Educación Básica* (MECE Básica) initiated in 1991 and a parallel program focused on secondary education (MECE Media) initiated in 1994. These programs first addressed infrastructure needs and next provided schools with basic material such as textbooks, then graduated them to more sophisticated inputs such as school and classroom libraries. Perhaps the most dramatic example can be seen in the number of textbooks distributed, which increased from 2 million to 7.3 million during 1989-97. Initially the books were selected by the ministry but after a few years schools were given

the freedom to choose from a wide range of centrally-procured publications and materials. All of these inputs had been neglected during the previous 8 years, initially due to the fiscal crisis, then in the drive for cost-cutting efficiency.

The MECE programs introduced process changes that emphasized community building, consensual planning and targeting of the disadvantaged. This included the following measures:

Building Professional/Community Networks

- In rural areas, multi-grade teachers meet twice a month in "microcenters" to receive training, discuss their individual or common pedagogical problems and share solutions. The meetings take place on a rotating basis in the schools forming a cluster, with technical support from a ministerial support network, while mothers tend the school children. The one-day program is half-structured, half unstructured.
- In P-900 schools, 2-hour weekly workshops bring together all teachers, with technical support from the network, to diagnose their problems, generate remedial strategies, learn to develop higher expectations for their students, and build on their cultural background/experience. This is complemented twice a week by learning workshops which bring together at-risk youth and community workers to help the former improve their self esteem, correct their academic deficiencies, and connect their school and life experiences. Finally, pupils conduct small projects in the community to apply concepts they have learned in school.
- In secondary schools, in order to promote reflection and continuous learning, teachers' professional groups (GPTs) meet once a week with technical assistance from universities and NGOs to plan their pedagogical work, share experiences, keep a team journal and work from a menu of activities. To link school life with youth culture as a way of fighting social issues conducive to dropout, with the help of community volunteers interested schools conduct weekly extracurricular activities in the arts, environment, sports, preventive health, etc.

¹² In 1993 a "shared financing" law allowed subsidized private schools for the first time to charge fees, accompanying this with a proportional reduction of the government capitation grants paid to these schools. Fees could be up to four times the basic capitation grant, beyond which schools were required to revert to private status. This increased the proportion of fee-paying students from 8 percent in 1993 to 32 percent in 1996, and drove the share of private financing of the school system to the equivalent of 9 percent of the capitation grants. This decision has been criticized as leading to greater social segmentation and segregation by making some schools unaffordable to young people from low socioeconomic backgrounds. To correct this, the 1997 legislation establishing the Full School Day eliminated the tax rebate offered to the fee-charging schools, requiring them instead to allocate 2/3 of the corresponding amount to a scholarship fund for needy students. (MINEDUC 1999)

School-based Improvement Plans

To encourage the schools to take a more proactive role, MINEDUC initiated funding on a competitive basis for "school-based improvement plans" (PMEs). For the first time in Chile's educational development, individual school communities were given the opportunity and the resources to diagnose their own problems and formulate and implement innovative solutions. To date, half of the country's basic schools and a one third of its secondary schools have implemented such plans.

School Networks through Technology

In a further effort to enrich the school and to modernize the curriculum, a nationwide school-computer network, ENLACES ("Linkages") was installed. The network's objectives are to create a broader learning community through exchange of experiences, promote technology-based innovation and provide teachers and pupils with opportunities to learn differently—horizontally, and interactively, via technology. The government's goal is to connect all 1,300 secondary schools and 50 percent of primary schools by the year 2000. So far coverage has been concentrated in urban areas, and the use of computers has been of a more personal than educational nature.

Table 1.3: Enlaces Coverage			
Year	Primary Schools	Secondary Schools	Total
1992-1994	55	0	55
1995	121	62	183
1996	311	162	473
1997	935	482	1417
1998	2164	955	3119
1999	2914	1300	4214
2000*	4000	1300	5300

*Planned

Targeted Support for Rural Schools

By the early 1990s, the government realized that schools in rural areas suffered systematic disadvantages under the capitation grant system, due to low population density and de facto lack of school choice. The MECE-Rural program delivered a specially designed modular curriculum with high quality self-paced materials for students and trained teachers in multi-grade teaching techniques. It also helped teachers mobilize community support for the schools. Finally, as mentioned earlier, it developed a network of "microcenters" to break the isolation of rural teachers.

These innovation processes are at the core of the cultural change happening in Chilean Schools. The MECE programs each created, like Russian dolls, a microcosm for the reform to come, with, for instance, special materials, paid teacher time assigned to team pedagogical work, support network and school-based innovations, all with a strong institutional identity. Because in 1990 it was next to impossible to introduce change in the MINEDUC, the preparation and implementation of

the MECE programs were entrusted to specially-created units inside the ministry, composed of younger, more educated and committed consultants. The zeal and focus of this relatively small group made it possible to introduce real change in the Chilean schools. However, these very qualities and their organization by program—outside the line structure of the ministry—long slowed down cross-disciplinary fertilization, more functional organization of the ministry, the development and projection to the outside world of a shared vision, and appropriation of the reform by outside stakeholders.

Targeted Support for At-risk Schools

A similarly targeted approach, the P-900 program, was developed for disadvantaged (non-multi-grade) schools in more densely populated areas. Specially designed materials, teacher training and community mobilization were also features of P-900.

Implementation Strategies and Politics of the Reform

It is important to understand the unique political context under which the democratic government crafted its education strategy. Though a significant majority of Chileans had supported the transition to democracy, they remained ideologically divided. Conservatives were wary of any attempts to undo the structural and market reforms of the Pinochet government and their influence in Chilean politics was protected by the 1990 Constitution. As the same time, socialists were rediscovering their voice after almost two decades of repression. All parties were averse to overt conflict or any hint of unilateral mandates. These elements created a climate where intricate consensus and controlled consultation were imperatives in policy formulation.

In education, the transition period was characterized by patient, incremental and consultative "change" processes. The word "reform" was carefully avoided because to the left, it elicited painful memories of arbitrary dictates and to political conservatives, it suggested policy reversal. To overcome these divisions, the newly-elected government of Eduardo Frei began a process of national consultation which culminated in the 1994 launch of a National Commission on the Modernization of Education (see Table 1.7). This strategy is illustrated by the government's decision to maintain the status-quo in favor of the administrative and financial decentralization introduced by the former administration. The progressive left adopted an attitude of political compromise and pragmatism.

Maintaining the Decentralized Management of the School System

During the transition to democracy, a heated internal debate took place in the ranks of the government coalition as to whether to re-centralize the management of the school system—as advocated by the teachers' union—or to maintain the municipal framework adopted during the 1980s. Ulti-

mately, the coalition government choose not to engage in any restructuring of education governance (i.e., municipalization) or finance (capitation grants) for three central reasons:

- There were strong supporters of the decentralized structure within the centrist wing of the coalition who believed that current arrangements, while not perfect, were a sound foundation for a modern education system;
- Broader political debates on decentralization were taking place beyond the education sector, particularly regarding municipal elections and finance. Until these culminated, adjustments in any specific sector seemed impractical. Furthermore, some members of the government coalition could see the democratic potential of the municipal management of schools; and
- Significant adjustments in education governance or finance would have required a constitutional amendment to the 1990 LOCE. This would have entailed a difficult battle with opposition conservatives, a battle the new democratic government did not wish to take on.

The capitation grant system and public/private competition mechanisms were also maintained, largely for the same reasons. It was believed that, once combined with increased investment and with general and targeted process interventions, these mechanisms could restore quality and close the equity gap, which had worsened during the 1980s.

Enrolling Teacher Support for Reform

The main government strategy was to create a new school culture through changes in classroom environment, professional inducements and transparent performance information. School improvement included extensive efforts to rebuild the social fabric through teacher networks and community participation in school renewal. A key additional factor was the government decision to start the process of healing government-teacher relations by satisfying the newly reestablished teachers union's demands for higher pay and a new regulatory framework.

Teacher salaries, which had declined by 20-40 percent in real terms during the 1980s, rose by 125 percent (real terms) from 1990-1998. This is to be compared with increases of 30 percent for other workers, 74 percent for public sector personnel, and some 40 percent for other professions.

Teachers had been radicalized by the deregulation of their labor market a decade before. Under pressure, the new government removed the profession from the (private sector) Labor Code which had governed it since the "municipalization" of the school system (1980) and made it subject to a new Teachers' Statute (1991). The statute was a marked policy reversal in the following ways:

- teachers regained job stability in the most radical form: teacher life tenure and no transfer without teacher consent, even among schools in the same municipality;
- centrally determined, rigid conditions of service (number of working days, maximum working hours, leave, etc.);
- centrally negotiated salary increases and new wage structure giving slightly less weight to seniority, and introducing a system of bonuses for hardship, in-service training, and experience; and
- teacher recruitment remained a municipal responsibility but salary negotiations were re-centralized, restoring the power of the teachers' union.

Table 1.4: Changes in Teacher Salaries Relative to Other National Indicators

Year	Teachers*		Average Salary**	Wage for Whole Economy
	Beginning	After 30 years	Public Sector	
1990	100.0	100.0	100.0	
1991	116.1	109.0	107.4	
1992	126.1	127.1	113.5	
1993	134.0	141.2	124.4	100.0
1994	160.5	164.5	135.0	105.2
1995	176.0	180.7	142.7	110.6
1996	189.9	193.8	149.5	113.6
1997	206.6	211.5	161.3	115.0
1998	225.1	221.3	173.7	117.2
Var. % 90/98	125.1	121.3	73.7	n/a
Var. % 93/98	68.0	56.7	39.8	17.2

Source: Finance Division, MINEDUC, Ministry of Finance, National Institute of Statistics

*Teachers with contracts of 30 weekly hours

**Average salary for all public sector workers

The new Teachers' Statute was seen by then Education Minister Ricardo Lagos as the repayment of a political "debt" and the price to pay for long term buy-in by the teaching corps to the new government's education policies, including maintenance of the municipal management of schools and of the capitation grant system. With these arguments, he enlisted the support of President Aylwin to win over the opposition within the Cabinet. Indeed, during the next six years, there were less than two weeks of national teacher strikes. However, this step was deplored by many, not only in the right-wing opposition, for the rigidity it introduced in sectoral management.

The adoption of the Teachers' Statute in 1991 generated severe managerial obstacles for the municipalities, which jeopardized their financial viability and limited their ability to compete with private subsidized schools. The Teachers' Statute made it practically impossible to adjust the teaching body to changing enrollment levels, leaving the municipal authorities with the challenge of a fixed cost structure—due to centrally determined salaries and job tenure of teachers—but a variable income level, the attendance-based capitation grants. A compensatory fund was created to help municipalities with excess teachers or a large proportion of senior teachers finance the impact on

their budget. From a market theory perspective, this was a serious distortion in the operation of competition between municipal and private subsidized schools.

Rewarding School Performance

The need to restore some flexibility in teacher deployment and to begin linking teacher compensation to performance led to the introduction in 1995 of the Annual Plans for Municipal Education Development (PADEM) and in 1996 of the System of Merit Awards to Schools (SNED). The PADEMs were an effort to temper the vagaries of the short-term, competitive funding approach by bringing together, through a planning exercise, the perspectives of educators and financial/physical planners. They also allow the municipal governments to downsize their teaching personnel, if so required by a decline in enrollments. Simultaneously, the PADEMs serve as a vehicle for implementing the SNED. Facing protracted strikes in 1996 and 1998, the government announced its intention to continue raising teacher salaries, subject to macro feasibility, but to link funding increases to improvements in the teaching quality, through a new system of school-based merit awards. The municipal governments actively support the idea and the number of teachers accepting it has been growing.

In addition to providing salary rewards to teachers, the SNED aims at stimulating and rewarding school practices which contribute to improvements in student learning.

The design of the SNED incorporates lessons learned from world-wide experience with merit pay, which suggest that (Mizala 1999):

- financial rewards are more effective when directed at the entire teaching team in a school rather than individual teachers because this encourages collaborative work;
- a merit-pay scheme should also address potential perverse effects such as the "free-rider" problem, discrimination against disadvantaged students, etc.;
- the eligibility criteria and the evaluation system should reflect the desired teacher behaviors and school characteristics; and,
- the system should be perceived as fair, transparent and socially acceptable.

The SNED, which is administered every other year, evaluates school performance based mainly on students' scores in the SIMCE (65 percent) and four other variables. The prior existence of SIMCE kept the costs of establishing the SNED reasonable. An important feature of the SNED design is that in each of the country's 13 regions, schools compete within homogenous groups (i.e., other schools with similar geographic and socioeconomic characteristics). The best-

performing schools each year—representing up to 25 percent of enrollments—win the award. Schools may win repeatedly. The SNED award was equivalent to about U.S. \$460 per teacher in 1998 (or slightly under one month's salary) and distributed as follows: 90 percent to be shared within the entire school team in the form of a salary bonuses pro-rated to the workload and the remaining 10 percent to be used as the school director decides.

Awards are based on an index composed of six variables—the weighting system was modified following an in-depth evaluation of the first round of awards in 1996.

Table 1.5. SNED Variables and Weights			
Variables	Indicators	Weight 96-97	Weight 98-99
Effectiveness	SIMCE scores in Math & Spanish	40%	37%
Value-added	Average SIMCE score gain	30%	28%
Capacity for initiative	Creation of teacher councils	6%	6%
	Participation in microcentro meetings		
	Pedagogical activities		
	Student council		
	School development plan		
Improvements in working conditions	Teacher workshops	2%	2%
	Full Staffing		
Equality of opportunities	Replacement of absent teachers	12%	22%
	Student retention rate		
	Student graduation rate		
	Differential groupings		
	Integration projects		
Integration of teachers and parents	Absence of discriminatory practices	10%	5%
	Acceptance of educational work by parents, guardians and students, and creation of parents' centers		

Source: "Chile's System of Merit Awards to Schools," R.W. McMeekin (1999)

The SNED is gaining acceptance, mainly among school directors, and more slowly among teachers, although the union has not objected.

Creating a Lasting Political Consensus for the Reform

Finally, the implementation of the government's education change process over this period benefited from a strong political commitment and a stable technical team. Political commitment to education was established early by Minister Lagos (March 90–September 92), who helped elevate education to the top of the national agenda. Lagos also was instrumental in shifting the attention of the public away from quantitative concerns toward equity and quality in educational opportunities. He effectively and urgently communicated that education had to change if the nation's social and economic ambitions were to be met. As a politician, he also undertook visible actions to illustrate the change, thus buying time to tackle big substantive issues.

Despite a change in leadership in 1994 (Eduardo Frei, a Christian Democrat led the Coalition to its second electoral victory) and three ministerial changes between 1990 and 1996—Jorge Arrate (September 1992-March 1994), Ernesto Schiefelbein (March 1994-September 1994) and Sergio Molina (September 1994-October 1996)—the spirit and substance of the reforms continued. Jorge Arrate advanced the fledgling equity and quality initiatives of the Lagos administration. Ernesto Schiefelbein is remembered as the internationally connected expert who forcefully denounced "frontal" teaching and put learning and the classroom at the center of attention. Sergio Molina is thought of as the man of dialogue who skillfully negotiated with the teachers' union the revision of the Teacher Statute and introduced the PADEM and SNED. Each of them brought particular talents and new inflections to the steering of the reform, but without changing its general orientation or core design. The stability in objectives helped to solidify advances and learn from missteps, creating a solid foundation for the Full School Day Reform of 1996.

Table 1.7: Consensus Building: The Brunner Report

One of the defining moments of the decade for the education sector was the establishment by President Frei, Jr., shortly after his election in 1994, of a National Commission on the Modernization of Education (chaired by Minister Molina), and a Technical Committee, led by "born-again" socialist and academic José-Joaquín Brunner. The commission consisted of 32, and the committee of 18, prominent personalities representing the entire political spectrum and all walks of intellectual life in the country.

They conducted a comprehensive systematic diagnosis of the "Challenges facing Chilean Education in the XXI century" and organized two consultations, one in the 13 regions, and one involving the 10 key national institutions (such as the Catholic Church and freemason lodge, leading universities, the national police, private education providers). They concluded with 5 recommendations:

- The need to make quality education for all the highest priority
- The urgency of reforming secondary education
- The necessity of strengthening the teaching profession
- The desirability of increasing school autonomy in order to raise effectiveness
- A national commitment to increase total spending for education from 4.5 percent to 8 percent of GDP

Most of the report's recommendations were endorsed by all political parties in a formal "Framework Agreement for the Modernization of Chilean Education" signed in January 1995. This agreement drove the introduction of PADEMs and SNED (discussed above). It also marked the peak of the national consensus on what had to be done: as reality—political or otherwise—settled in and concrete choices were made, some stakeholders, especially in the right-wing opposition, would later dissent.

From Incremental Change to Full-scale Reform: Linking Top-down and Bottom-up

Context

In the aftermath of the 1994 Brunner Commission Report a broad political consensus emerged that the education experiments launched in 1990s should be deepened. In addition, the newly elected president, Eduardo Frei Jr., was searching for a social policy initiative which would define his presidency.

In July of that year, Finance Minister Aninat announced an "historic opportunity" for education reform in Chile. He referred to the exceptional set of circumstances Chile was facing: a leadership genuinely supportive of educational development; a sustained economic growth that made it possible to fund a substantial increase in educational investment; and a set of policies at an advanced stage of development. Coming from the most influential member of Frei's cabinet, Aninat's comments were indicative of both education's priority within the political agenda and the close partnership between the Presidency and the Ministries of Finance and Education. This partnership extended to the more operational level as top technocrats came together as an informal task force to discuss reform parameters and strategies.¹³ Throughout 1995 this high-level group met frequently and privately to discuss how the opportunity might be capitalized upon.

By March of 1996 a reform design had been developed by the internal task force and was presented by Minister Aninat to five ministers and the president. At its core was a proposal to extend the length of the school day, effectively ending double shift school management.¹⁴ Over the next two months, the plan was critiqued and internal inconsistencies ironed out. On May 21, 1996, President Frei announced the Full School Day reform which Minister Aninat and then Education Minister Sergio Molina presented jointly to the public the next day. The initiative had been prepared in secrecy and took most people by surprise, triggering many vocal reactions. It was the most significant move in Chile's education policy since the municipalization decision of 1981. Given the considerable fiscal implications, the Budget Director, José-Pablo Arellano, became Minister of Education in October 1996. Unlike the transition from a military to democratic government, which involved a changed in policies, the FSD marks a new threshold in terms of growth, depth and pace, but the philosophy remained the same.

Core Education Initiatives

The FSD reform includes four programmatic packages which became known as the four pillars of the reform. The programs were conceived to generate synergy over time. However, the FSD component quickly drew universal attention, with its direct and visible consequences on the education budget, the organization of the education system and its impact on teachers, pupils and school communities, as well on women's daily lives and families' functioning.

¹³ The genesis of the Historic Opportunity illustrates the exceptional partnership between politicians (President Frei, Ministers Aninat of Finance and Molina of Education) and technicians (J-P. Arellano, then Budget Director and subsequently Education Minister, C. Cox, JE Huidobro and P. Gonzalez from Education, M. Marcel and J. Espinosa from Finance) which may be one of the main factors behind the success of the Chilean reform.

¹⁴ As president, Frei's father had achieved universal access to education in the 1960s, thus perhaps shedding some light on his son's desire to bring the legacy to new heights by universalizing quality.

The Four Pillars of the 1996 Full School Day Reform

- **Extending the School Day:** The FSD reform extended the school week from 30 to 38 hours in primary education and from 36 to 42 hours in secondary education. More than simply aligning time-in-school with that of the OECD countries, the FSD reform was intended as an organizing principle for full school renewal. The idea was to enrich the teaching/learning process by giving students more time for studies and extra-curricular activities and teachers more time for planning their lessons, engaging in teamwork, pursuing their professional development, and conferring with parents. The gradual move from double to single shifting is supported by a major program of infrastructure development (20,000 classrooms) and school feeding for the most vulnerable children (over 600,000). By the end of 1998 some 50 percent of schools had joined the program, representing 18 percent of national enrollments. All municipal and private-subsidized schools are expected to adopt the FSD reform by 2002, unless they can demonstrate superior performance.
- **A New Curriculum Framework:** A national framework sets objectives for about 70 percent of what children are supposed to know; schools have autonomy over the remaining 30 percent. The new curriculum emphasizes the mastery of higher order skills and competencies required by a "knowledge society" (critical thinking, abstract reasoning, problem-solving, information processing, communication, negotiation, etc.) as well as "transversal" learning objectives such as the relationship between man and his environment, and moral values such as tolerance and solidarity.

Table 1.8: Curricular Renovation		
Area	From:	To:
Language & Communication	Focus on grammar & literature	Focus on linguistic and communication skills
Mathematics	Abstract mathematical reasoning	Applied mathematics
History & Social Sciences	Knowledge of history	Understanding the present in its historic context
Philosophy	Knowledge of discipline	Reflection on the meaning of life & human relations
Science	Training scientists	Science literacy for all
Technology	Manual work	Design, production & utilization processes
Art	Technical approach	Expressiveness & appreciation of art
Physical Education	Training athletes	Fitness for a higher quality of life

Source: J.E. Garcia Huidobro (1997)

The disciplinary content stresses the practical, to equip young people to confront the dilemmas and challenges of today's world. The national framework emphasizes the core knowledge required for nation-building and international competitiveness, while local variations reflect diverse needs and priorities. Already beginning in 1995, the so-called "Curricular Plans" in basic education had given an opportunity for schools to develop their own programs. Most of the schools which availed themselves of this option were private or private/subsidized.

- **Teacher Professionalism:** A battery of monetary, professional and symbolic incentives aim at renovating teacher practice (i.e., improving their ability to pursue diverse teaching strategies adapted to different students' needs, a characteristic which also implies continuous professional development and performance evaluation), and promoting interactive teaching methods and pupils' autonomy. Incentives include the doubling of salaries in real terms since 1990; team and value-added based merit pay (through SNED); premia for excellence in teaching (beginning in 1997); exposure to best teaching practices worldwide through a program of study tours (3,000 beneficiaries); scholarships to attract good students into the profession (300 per year); competitive funding to re-orient teacher education in 17 universities (out of 35 applicants) and align it with the requirements of the reform; and in-service training programs to "re-tool" some 25,000 teachers.
- **Secondary School Innovation:** A competitively funded "flagship" program, the "Montegrando Project," involving 51 secondary schools (out of 1,300) with a high proportion of needy students, supports the formation of a network that will model and disseminate in an "organic" way innovative teaching, learning and managerial practices. Each selected school receives US\$100,000 plus US\$100 per student per year.

These changes, introduced by the FSD reform, were added to existing programs such as MECE and ENLACES. A key challenge arising from the May 1996 announcement was that all the elements of the FSD reform which previously had been moving independently now had to be integrated to achieve synergy. The multiplicity of parallel programs with strong institutional "identities" complicated this task.

Reorienting the Use of Assessment Data

To foster equity and quality in education, the government decided to rely more systematically on an improved student assessment system. The education team saw assessment, embodied in the SIMCE, both as a tool to inform parental school choice, as had the military government, and, what was new, as a central instrument to ensure that decentralization was not synonymous with inequity. The government initiated efforts to disseminate SIMCE results more widely via the press and in-house publications. SIMCE data also were used as the basis for targeting resources on the lowest-performing schools.

Implementation Strategies and Politics of the Reform

Communicating the Reform's Objectives

The announcement of the FSD reform took the country and even the ministry by surprise. Externally, there was bewilderment, because since 1990 MINEDUC officials had insisted that what was happening was cautious change, not reform, due to the unpalatable memories the term "reform"

elicited in education circles. The teachers' union complained about not having been involved and in reaction organized their own six months consultation which culminated in a National Congress (October 1997). Although the overall tone of the event had a traditional industrial-union outlook, it was the first time the union reflected about themes other than conditions of services and salaries. Internally, only a handful of officials knew about the forthcoming presidential statement and most found out through the media, giving them a sense of not belonging to this defining moment.

The lack of internal communications put central MINEDUC staff in the awkward position of being unable to explain to outsiders the overall significance of what they had been working on for years. Even within the MECE group, because of the fragmented organization of the ministry, where separate teams had been working in parallel on separate programs (e.g., P-900, MECE rural, MECE Media, etc.), a year after the launching of the reform, few officials below the top level had a clear vision of the whole. In the months following the announcement, the ministry itself seemed surprised to see the Full School Day component stealing the show, while it was only one part of the overall reform package. Such inconsistencies were not substantively significant, but were exploited by the political opposition.

At ground level, schools had been bombarded since 1991 with programs that were well-designed and reflected a carefully crafted, incremental strategy. However, schools had never been provided with an overarching vision of how these pieces would become integrated. As each program came with a package of resources, the temptation had been to adopt all of them, but insofar as personnel were trained separately for each, and they followed different procedures, they appeared to the school as a superimposition of requirements, generating a sense of overload and fragmentation as well as allowing a sense of reform fatigue to emerge. Thus, it could be said that despite (or because of) five years of constant change, the overall system was neither prepared nor organized for a development of the magnitude of the Full School Day Reform.

For the first seven months following the FSD reform's announcement, the ministry was without a communications strategy. The Cabinet and the design team, busy as they were with the technical aspects of the reform and satisfied that their product was as good as could be (given the considerable amount of homework—desk literature reviews and study tours—done), failed to communicate to the general public and key education stakeholders in simple, coherent and relevant societal terms, what the reform was really all about.

When the MINEDUC finally launched a communication campaign on the reform's objectives, poor coordination on its marketing strategy limited its overall impact. Repeated changes in the content of messages created confusion. Messages were not tested and targeted for different audiences.

While the situation slowly improved as the spectrum of messages was reduced, the ineffectiveness of the campaign remained tied to the ministry's indecision regarding which message was most important (e.g., should the focus be the new curriculum or the right to education for all?)

Gaining Legislative Approval

Because of the FSD reform's significant budgetary, curricular and constitutional implications, its implementation required legislative approval. This marked one of the first times that education policy moved out of the executive branch to be openly debated in the legislature. Over a whole year, the discussion in Congress went back and forth twice between the finance and education commissions. Debates about the education reform were held in plenary sessions of the upper and lower chambers of Congress and culminated before the Constitutional tribunal. Both chambers invited the teachers' union, the Association of Municipal Governments, and the Federation of Private Education Providers to testify.

The key points debated were:

- **Financing of the reform:** it was agreed that in order to finance the incremental costs, the tax on value-added, scheduled to be reduced to 17 percent in 1997, would be maintained at 18 percent. This was initially opposed by the conservative Opposition which favored alternative sources of funding (savings and sales of public enterprises) as recommended by the Brunner Report.
- **Resource allocation mechanism:** the FSD reform implied a huge increase in physical capacity and to allow this, the draft bill proposed a competitive funding system to fund the necessary investment in infrastructure. Opposition parties and representatives of private subsidized education wanted additional funds to be distributed competitively via an increase in the capitation grant. The left objected to public financing of construction of private (often denominational) schools. Ultimately, this concern was resolved by demanding financial guarantees from private providers and a pledge that they would operate as schools for 50 years.
- **Revision of the shared financing mechanism:** in order to promote equity, the tax rebate to which private subsidized schools charging fees were previously entitled was eliminated; 2/3 of the corresponding amount had to be used to fund scholarships for needy students. Furthermore, the law provided for advance information to parents on proposed fee adjustments for the following 3 years.
- **Compulsory nature of the FSD reform:** private providers and the right-wing opposition objected to the proposal that the FSD reform be compulsory for all schools receiving government

subsidies, arguing that this was a violation of the sacred principle of "Freedom of Education" which gives private administrators the right to decide how to organize their schools and to parents the right to choose. The compromise was that exceptions would be granted with proof of superior performance.

- **Increase in the capitation grant:** the amount of the per student grant was increased more than proportionally to the number of hours of instruction under the new regime, in order to free time for technical teamwork by the teachers. One option was to reduce teaching time from 75 to 70 percent, another was to increase teachers' contracts by two hours per week. The latter option was selected, leaving schools administrators to decide how to organize staff time.
- **Inclusion of first and second grades:** although the initial plan was to limit the FSD reform to grades 3-8, eligibility was extended to the first two grades in light of the major potential benefits of including younger children from the most vulnerable groups.

The law was finally approved on October 7, 1997, and the Rules elaborating on the modalities of its implementation, a few weeks later.

Generating Stakeholder Support

Because the government had developed the FSD reform proposal in a quiet manner, the battle for stakeholder support took place parallel to the legislative debate. While many domestic education observers were supportive of the reform, they described the ministry as "defensive" or "reactive" in its operating style. A lingering reluctance to share work-in-progress (with the notable exception of the secondary curriculum) manifested MINEDUC's uneasiness with other education stakeholders and was interpreted by stakeholders as a "lack of trust" or "paternalism." Two key partners of MINEDUC, the teachers' union and the Association of Chilean Municipalities, are also platforms for politicians with national ambitions, introducing perverse effects in the dialogue.

The MINEDUC's lack of a communication strategy and limited participation largely explain why the government was slow in getting political mileage from a reform which outside Chile attracted a considerable amount of favorable attention. Another factor in this rocky beginning is the normal resistance to far-reaching change.

Given the broad nature of the reform, nearly all education stakeholders would be impacted, and nearly all had concerns with one or more elements of the reform. These concerns are summarized in Table 1.9.

Table 1.9: FSD Reform: Stakeholder Analysis

Who	How Much Power	Areas of Focus	Position vis-à-vis the 1996 Reform
Teachers	Ultimate implementers of the reform. Unless they internalize it, it won't happen.	Survival in classroom, their pupils, pedagogy	An estimated 30 to 50 percent of teachers are very enthusiastic about the reform, which treats them as professionals with autonomy. Another third is positive but passive. The remainder against or not interested.
Teachers' Union	A traditional union, with left-wing leadership. Has the power to call strikes and has done so regularly at the time of bi-annual salary negotiations (except during 1991-96).	Working conditions, salaries, status ("dignity")	Resistance to the reform because they had not been consulted. Given the opportunity to consult on earlier occasions (Brunner Report) they had not seized it. Organized own national Congress where educational matters were discussed for the first time. Have as many or more areas of contention with Municipalities who are their employers, e.g., on teacher evaluation, job stability, "historic debts." A few modern, younger unionists open to change in the direction of professional associations. In general, consider that the government has not paid back its "debt" to teachers.
Parents	In Chile, they do not represent a vocal political force.	Welfare & safety of their children for lower socioeconomic groups, academic performance for higher socioeconomic groups	From the beginning they have approved of the FSD reform because it would keep children off the streets. But they have not stood up in defense of it.
Students	The consultation on the secondary curriculum was the first time students' opinion was sought.	Relevance of education to youth culture, modern life & labor market	Survey of secondary students showed positive reaction, although more so on the linkage with youth culture than on preparation for labor market.
FIDE (Federation of Private Education Providers)	FIDE members account for 42 percent of enrollments, distributed between fully private (9 percent) & private/subsidized (33 percent) schools. They have access to right-wing politicians and to resources. Strong say in educational policy.	Freedom of educational choice for parents and private providers	Although initially among those who criticized the reform for being improvised and too ambitious, and MINEDUC for not having shared the draft FSD Bill with them in advance, they soon saw what was in it for them and started intensively training personnel and getting organized to meet the challenges. During the legislative debate, they fiercely defended themselves against what they see as government interference into the management of private schools. They agree that the reform and MINEDUC in general are going in the right direction and have promptly seized the opportunities offered (e.g., the right to develop own curriculum)
The Catholic Church	The Catholic Church controls 1/4 of all private schools. Although non-monolithic, it is frequently referred to as the largest non-governmental political force in Chile.	Values, equity	To a large extent the views of the Church coincide with those of FIDE and the right-wing opposition. The Church has been critical of the "moral relativism" of the curriculum, especially with reference to sexual education.

"Improvisation" in the Implementation of the FSD Reform

Physical implementation of the FSD reform had not been planned, partly for lack of time and partly because this was considered a decentralized responsibility. The only existing tool for decentralized planning which could have served as a vehicle for FSD reform implementation was the PADEM. But only in a few municipalities had the (still new) PADEMs truly integrated the perspectives of physical planners and financial officers on one hand, with educators and outside stakeholders on the other hand. Thus, only as the reform entered implementation did it become apparent that the system was not prepared or organized for it and that its implementation capacity was insufficient.

Furthermore, the originally planned reform implementation and coordination unit (in the ministry) did not materialize. An Executive Secretary for the FSD reform was appointed, but was not made responsible for the other three programs, and as such was not given the resources or the authority to be fully effective. There was no mechanism to anticipate and rapidly resolve the unavoidable problems, mainly with the infrastructure and school feeding programs, that emerged in the early phases of implementation.

Delays in Modernization of the Ministry

Despite a global plan launched by the Frei administration in 1995 to modernize government and public management¹⁵, interviews conducted in and outside the MINEDUC in 1997 revealed that, although the ministry was widely recognized as having a strategic vision, it was much weaker on the "nuts and bolts" of physical implementation. Specific issues identified were:

- institutional fragmentation;
- ill-defined decentralized responsibilities;
- weak information, communication and participation;
- under-developed Educational Management Information System (EMIS) and research;
- outdated human resource policy; and
- insufficient use of modern technology in ministerial management.

These managerial shortcomings explain some of the difficulties faced by MINEDUC in the early implementation of the FSD reform.

¹⁵ A modernization commission developed a five pronged strategy aimed at improving human resources management, client-orientation and the quality of services, transparency and probity, strategic management, regulation, decentralization, and communication.

Table 1.10 Consultation on the New Secondary Education Curriculum

Aware of the opposition generated by the secrecy which had surrounded the conception and announcement of the Full School Day, the government began inviting stakeholders to help shape other elements of the Reform which still required definition.

One example was the national consultation on the secondary education curriculum. The previous curriculum dated back to the 1980s. It badly needed modernization, as recommended by the Brunner Commission and provided for in the 1990 Constitutional Law on Education (LOCE). The government's education team decided to avoid a top-down and up front approach to curriculum revision and instead opted to create conditions for curricular changes at school level linked to pedagogical renovation. As for basic education, schools were granted the option of developing their own curriculum. In 1996-1997, a curricular framework for Secondary Education based on OECD guidelines was developed by teams of teachers, academics, and representatives of the economic sector. Centered on individual learning, it emphasized foundational disciplines to produce adaptable, fast learning workers and displays a practical orientation to prepare them better for the reality of the labor market. It reduced by tenfold the number of technical specializations and occupational families, to promote versatility and flexibility. "Transversal objectives" ensured that values and behaviors such as discipline, respect and solidarity, self esteem, intellectual rigor, positives attitudes, etc. as well as computer science and technology are taught through all disciplinary areas, including art.

The ensuing dialogue marked an important departure from past "consultation" in the sense that this time stakeholders were consulted mid-way through the design process and actually had the opportunity to influence it. The draft of the curriculum was submitted for comments to a sample of teachers, to some 100 key Chilean institutions (the Catholic Church, the teachers' union, the political parties, the army, free masonry, the chamber of commerce) and to the entire secondary school system. The response from institutions was moderate but included all the key actors. The rate of approval was high, with one important exception: strong parental and business support for the vocational-technical streams remained despite the ministry's position that such streams were becoming internationally obsolete. Media discussion of the curriculum was lively during this period. The process culminated with a review by a panel of international experts to ensure that the new curriculum met world class standards. The revised Curricular Minimal Objectives and Basic Contents Document was approved in May 1998 and is being introduced gradually until 2002.

Status of the FSD Reform After Two Years

Despite a rocky beginning—including a teacher strike as Minister J.P. Arellano began his tenure at the end of 1996, protracted debate in the Congress, daily articles in the media (which is largely controlled by the Opposition), and university student unrest in May-July 1997¹⁶—by mid-1998 notable progress had been achieved.

- The Full School Day Legislation and regulations were approved, as was funding for the reform
- New curriculum objectives for secondary education were endorsed by the Higher Council for Education
- The SNED weightings were revised in light of experience to better promote teacher teamwork and school linkages with the community
- The FSD bill introduced a scholarship fund for needy students attending private subsidized schools with shared financing

¹⁶ Student protests absorbed a considerable amount of the Minister's energy over this period and led to a broad-ranging package of higher education reforms not discussed in this report. These reforms aim at improving the equity of higher education finance, the relevance of programs, and the efficiency of institutions.

- Initial implementation problems induced more cooperative planning at the sub-national level, particularly in the areas of infrastructure and school feeding
- Missteps in the communications arena led to more comprehensive surveys of key stakeholders (teachers, parents, the ministerial bureaucracy) and clearer outreach and communications strategies

In terms of informal rules, organizational culture and learning, MINEDUC acquired greater credibility by responding to people's concerns, especially the need for better infrastructure and school feeding planning as well as demands emanating from teachers. This contributed to slowly rebuilding the trust destroyed during the 1980s. For instance, there was progress in internal thinking on issues such as school autonomy, new style supervision, and quality assurance. Stakeholder surveys have been exploited as inputs into strategic and tactical thinking. As a result of these factors, ideas such as teacher evaluation or school autonomy, which at the beginning of the decade were rejected by teachers, are now increasingly accepted.

Stocktaking

Looking back at the entire decade it is particularly noteworthy that, in addition to introducing many innovations, the government not only kept the capitation grant system but continuously improved on it by making information public, restoring the value of the grant which had declined by 32 per cent in real terms from 1981-91, and beginning to differentiate the value of the voucher to reflect the higher per-student costs in rural areas.

Another remarkable trend is the extent of the efforts to improve equity. In addition to P-900 and MECE-Rural, during the 1990s:

- The capitation grant to rural schools increased nearly tenfold to reach nearly 21 billion pesos (approximately US\$ 41 million);
- A subsidy for students with learning difficulties was created in 1995 and by 1999 reached 2.7 billion pesos (US\$ 5.3 million);
- Allocations to special education increased six-fold to 28.5 billion pesos (US\$ 56 million) in 1999;
- Scholarships were granted to indigenous, low-income and distinguished students;
- Pre-school education coverage doubled to half a million children (albeit still low);
- School-feeding programs reached almost 1.2 million children; and
- School health programs benefited 1.7 million children.

The Debate Around the Policy Choices of the Center-left Coalition

Voucher advocates in Chile argue that the goals of increased quality and equity set by the democratic government in 1990 did not need to be pursued through the centrally-driven, direct interventions (provision of textbooks, ENLACES, PMEs, P-900, school feeding, etc.) under the MECE programs. Increases or differentiated increases in the capitation grant could have achieved the same policy ends and, by allowing schools to choose their input and process mixes, might even have achieved the same ends more efficiently. From this perspective, some economists argue that the ministry's direct intervention programs in effect undermined the voucher system, rather than complementing it.

Unfortunately, there is no way to establish empirically whether a differentiated, more flexible and portable voucher scheme, leading to a different mix of inputs and processes, would have yielded better outcomes than those which have in fact been achieved. It can be noted, however, that even the most highly decentralized education systems in existence today in other countries provide some direct core support to schools. Researchers who have extensively studied school reforms in Chicago (US), for one example, strongly conclude that decentralizing decision making to the schools was not enough; complementary core support provided from the central administration was an essential element of the improvements registered in student learning outcomes¹⁷.

It is clear that political economy factors were important, and maybe predominant, in the Chilean choice of strategy in 1990. After a decade of controversy over market-oriented reforms that diminished the direct role of the state, the new government was eager to be perceived as "different" – engaging directly on priority social issues, delivering tangible goods, and visibly working to aid the impoverished. Direct and targeted intervention programs such as MECE, school feeding, etc. served these objectives.

But ministry staff also had technical rationales. In the early 1990s, and to some extent still, there was less than complete confidence among technicians that schools' discretionary resources would be allocated to inputs or activities known to make a difference in the classroom, such as well-designed teacher professional development and high-quality textbooks. In the (somewhat paternalistic?) view of the ministry, all schools might not have access to responsible and competitive providers of quality-enhancing goods and services. More concentrated technical capacity and possible economies of scale made it more efficient for some issues to be handled with technical leadership from the ministry.

¹⁷ See Bryk (1998).

MINEDUC staff point to the experience with textbooks. Giving schools "carte blanche" in this area would have run the risk that less-informed schools would under-spend on books, or buy low-quality books. Prescribing which books to use, but leaving the actual purchase to schools would neither guarantee adequate spending on books nor permit economies of scale in procurement. The strategy actually followed—to finance textbooks directly through a centralized bidding process with publishers while leaving schools a wide range of books to choose from in order to meet their students' needs—is widely acknowledged to have generated economies of scale, resulted in greatly improved publishers' standards and protected a reasonable measure of pedagogical autonomy for the schools.

Although voucher advocates in Chile argue for even more autonomy at the school level, most of the ministry's programs during the 1990s in fact appear as creative attempts to balance "supply-driven" and "demand-driven" approaches. Incremental funding for school-level quality improvement was not channeled through the voucher, but it was channeled through competitively-funded PMEs. In lieu of prescribing a single formula for improving school quality, the ministry invited schools to submit innovative proposals which were evaluated and rewarded competitively. By establishing the "rules of the game" and funding proposals selectively, the ministry did "control the process" and restrict schools' flexibility somewhat, but this should be balanced against the advantages the PME system generated, of better central awareness of the school-level innovations going on and greater diffusion of the best ideas.

As the system has matured over time, in some areas the Chilean authorities opted explicitly for augmenting the capitation grant instead of direct intervention. This has been the case in the latter part of the 1990s for the funding of salary increases, additional teacher time to accommodate the Full School Day, teacher pedagogical teamwork, supplementary attention to at-risk students and for school repairs. Ultimately, in Chile during the 1990s, both forms of financing have grown proportionately, as illustrated by the table below:

Table 1.11: Educational Spending per Student (1998 \$/month)		
Year	Capitation Grant	Other (Including School Feeding)
1990	117	31
1998	248	80

Source: Division of Budget and Planning

Balancing supply and demand approaches is difficult. The MECE team, while broadly praised, has been criticized for doing too much "hand-holding" and giving the schools overly detailed prescriptions. On the other hand, the progress made in terms of schools' growing self-confidence and taking initiative speaks for itself. The bottom line seems to be

that the selection of a "third way" in Chile, combining market and directed approaches, has produced results.

Reform Impact and Underlying Factors

This chapter documents the successes and remaining challenges facing the Chilean education system after three waves of reform spanning twenty years. In analyzing the underlying factors, it looks pragmatically at the interplay between the market policies of the 1980s, which have been exhaustively studied, and the successive contributions of the 1990s, which are relatively less known outside educators' circles.

Quality: All Children Are Learning More

The quality of an education system is to be judged by what it does, not with its most affluent but with its most disadvantaged students. In addition to trying to boost student learning in absolute terms, the two democratic governments since 1990 have followed a policy of "positive discrimination" in favor of the more vulnerable. Data evidence across-the-board gains in average learning outcomes. But they also show, importantly, that the gaps between private and municipal, and between rural and urban schools have been closing. Chile's experience in the 1990s provides encouraging evidence that well-designed programs aimed at equalizing educational opportunities *can* make a difference in a relatively short period.

Average learning outcomes have improved. Improvement appears to have been most robust at the grade 4 level, where the student population has been more or less stable at nearly universal participation. (Annex Table A presents results at other levels as well.)

Table 2.1: Grade 4 Average Student Learning Outcomes, 1988-96

Type of School	1988	1990	1992	1994	1996
Municipal	49.25	56.70	63.85	64.43	68.00
Private-subsidized	56.35	58.80	70.15	70.66	73.65
Fully paid Private	76.15	80.05	86.05	85.07	85.85

Source: SIMCE

The achievement gap between public and private schools is narrowing, especially in the early grades, e.g., from 26 to 17 points between 1988 and 1996 for grade 4 and from 24 to 20 points for grade 8. This trend has been weaker at the secondary level.

Municipal schools continue to have the lowest absolute results. In both math and Spanish, private and private-subsidized schools still register stronger achievement scores. However, as shown in Table 2.2, much of this differential disappears when the lower socioeconomic status of municipal school students is controlled for. These findings of Camoy and McEwan (1999) are in line with previous work by Mizala and Romaguero (1998).

Table 2.2: Comparative Student Achievement, by Type of School (1994-1996)				
	Municipal (Non-voucher)	Voucher Schools		Unsubsidized (Non-voucher)
		Non-religious	Catholic	
Raw difference in student achievement (over municipal schools)				
Math score	-	3.2	10.0	18.0
Spanish score	-	3.9	11.4	18.6
Difference adjusting for household factors*				
Math score	-	-0.9	2.7	4.7
Spanish score	-	-0.8	3.2	

Source: Camoy & McEwan (1999)

*Household factors include parents' years of education and monthly family income. For full details, see Annex Table B.

There has been notable progress in rural education, where the achievement gap relative to the national average has shrunk from more than 30 percentage points to about 10 percentage points during the 1990s.

Table 2.3: Rural School vs. National Achievement in Grade 4		
Average Scores	1992	1996
<u>Spanish</u>		
National Average	68	72
Rural Average	34	60
<u>Mathematics</u>		
National Average	67	71
Rural Average	34	61

Source: SIMCE; B. Carlson (2000).

The gap between the most at-risk, non-multi-grade schools in low-income areas (which participate in the P-900 program) and the rest of the system is also declining, although it is difficult to compare achievements of P-900 schools to other schools because the former have a tendency to enter and exit the program.

Table 2.4: P-900 Schools vs. National Achievement in Grade 4		
Cohorts being compared	Gap 1990 (% points)	Gap 1998 (% points)
P-900 vs. National Average	17	9
P-900 vs. National Municipal Average	12	6
P-900 vs. Private-Subsidized Schools Average	25	19

Source: SIMCE data

The percentage of students reaching the target score of 70 percent correct answers has increased, and increased faster than average scores, further evidencing an improvement in the distribution of learning outcomes.

Table 2.5: Proportion of Grade 8 Students Answering 70 percent of Questions Correctly			
Discipline	Year		
	1993	1995	1997
Mathematics	23.52	27.46	35.58
Spanish	30.89	29.25	43.19
History & Geography	23.05	35.86	40.92
Natural Sciences	30.43	33.61	37.79

Source: SIMCE data

Interpreting These Data

A passionate and often ideological debate has raged around the interpretation of student achievement data in Chile. Indeed, it is important to underscore that while raw achievement trends are fairly robust, they are subject to important measurement limitations. For example, the degree of difficulty of the SIMCE may be too low in a given grade. Furthermore, the technique known as "equating" (which ensures that results are comparable from one measurement to the next) has only been introduced in the SIMCE for the past few years, and many believe that the 1996 test was substantially easier than the 1988 test. This is illustrated by the fact that the scores of fully paid private schools (FFPS) (Table 2.1) which did not benefit from any special program, increased by nearly 10 points during the period, putting into perspective the increments registered by subsidized schools. Using the FFPS scores as a base index=100, the performance of the two types of subsidized schools can be rapidly re-calculated as follows:

Table 2.6: Adjusted Grade 4 Student Learning Outcomes			
Year	Type of School		
	Municipal	Private-Subsidized	Private
1988	65	74	100
1990	71	74	100
1992	74	82	100
1994	76	83	100
1996	79	86	100

Source: SIMCE

These adjusted numbers show that while progress in closing the gap in student learning outcomes may not have been as strong as the raw scores would suggest, it is nevertheless impressive.

Another way of benchmarking progress is provided by international comparisons. Pending the results of the repeat round of the Third International Math and Science Study (TIMSS-R), in which Chile participated in 1999, the table below which summarizes the results of UNESCO/OREALC's first Latin American Regional Comparative Assessment (1998) gives a sense of the relative level of

achievement of Chilean pupils, competing for second and third positions with Brazil and Argentina, just above Colombia, but well below Cuba.

Table 2.7: Countries' Scores in 1998 UNESCO/OREALC Assessment of Student Outcomes in Latin America and the Caribbean				
Group	Language		Mathematics	
	Grade 3	Grade 4	Grade 3	Grade 4
1	Cuba (343)	Cuba (349)	Cuba (351)	Cuba (353)
2	Argentina (263) Chile (259) Brazil (256)	Chile (286) Argentina (282) Brazil (277) Colombia (265) Mexico (252) Paraguay (251)	Argentina (251)	Brazil (269) Argentina (269) Chile (265) Colombia (258) Mexico (256)
3	Venezuela (242) Colombia (238) Bolivia (232) Paraguay (229) Mexico (224) Dominican Republic (220) Honduras (216)	Venezuela (249) Honduras (238) Bolivia (233) Dominican Republic (232)	Brazil (247) Chile (242) Colombia (240) Bolivia (240) Mexico (236) Paraguay (232) Dominican Republic (225) Venezuela (220) Honduras (218)	Paraguay (248) Bolivia (245) Dominican Republic (234) Honduras (231) Venezuela (226)

Source: UNESCO/OREALC (1998)

Discerning the relative learning impact of the various reform components such as decentralization, competition, new pedagogical processes, targeted programs and increased educational investment remains a major challenge. Comparing student achievement by type of school has been a focus of attention, as policymakers and researchers seek to determine to what extent competition and private management have driven quality. This is complicated by the difficulty of controlling for students socioeconomic characteristics.

Recent analyses comparing the performance of all three types of schools (municipal, private-subsidized and private) have estimated initial outcomes so as to control for differences in innate abilities, socioeconomic characteristics and other variables. One of the most recent studies covering the entire universe of schools participating in the 1996 SIMCE showed that fully private schools and subsidized private schools scored respectively 19 points and 4.5 points higher than municipal schools (raw scores), but that most of these gaps disappeared when socioeconomic differences were accounted for (Mizala & Romaguera 1998).¹⁸ The superior achievement of subsidized private schools ceased to be statistically significant, at least for grade 4, when students' socioeconomic status, a family "vulnerability" measure, and school characteristics (geographic loca-

¹⁸ An analysis of value added using a proxy, a well designed sample, a well specified model, and appropriate control for students' socioeconomic characteristics showed no statistically significant differences between municipal and private-subsidized schools.

tion, number and experience of teachers, gender, existence of a pre-school program) were taken into account.¹⁹ In Chile as everywhere else, socioeconomic factors carry considerable weight as a determinant of learning outcomes. On the other hand, schools with comparable vulnerability indices show large variations in scores. In general the data show that larger schools tend to be associated with better results, although with a wide variance which may be attributed to the quality of teaching. Similarly, there is a positive correlation between the homogeneity of the student population and a school's achievement results.

Equity: Despite Progress, Still a Frustrated Commitment

Primary and secondary school participation and completion rates are relatively high across all income groups in Chile compared with most developing countries. Moreover the government through carefully targeted programs has successfully raised achievements among lower-income and rural students. However it is sobering to note that, even as average years of schooling have increased for all income groups, between 1992 and 1996 the gap in coverage between the highest and the lowest quintiles has increased at two levels: modestly with respect to pre-school—where the participation rates, at less than 50 percent for the most affluent, remain comparatively low by international standards—and strikingly for higher education, the level of attainment reached by 60 percent of the rich but less than 10 percent of the poorest.

Table 2.8: Coverage by Level and Income Quintile

Level	I		II		III		IV		V	
	1992	1996	1992	1996	1992	1996	1992	1996	1992	1996
Pre-Basic	19.4	22.3	21.1	26.8	23.4	30.0	28.0	36.8	43.1	48.4
Basic	92.2	96.5	97.1	98.4	97.8	99.0	98.4	99.4	99.4	99.7
Secondary	73.6	75.3	77.9	81.0	83.0	89.3	88.8	95.3	96.7	97.2
Higher	7.8	8.5	9.8	15.1	13.1	21.5	23.6	34.7	41.1	59.7

Source: Household Survey, 1992 & 1996

This pattern of low participation on the part of the poor, even in a robustly growing economy, is one of many factors contributing to an overall lack of improvement in income distribution during the 1990s, although poverty incidence (based on a poverty line of income under \$2.60/day)²⁰ has been halved to 23 percent during the period. To be fair, however, education reforms cannot be expected

¹⁹ According to the authors, one reason why historically, successive analyses of SIMCE results by type of school have shown widely different results, leading to ideologically biased interpretations, is that they were sample-based. The findings, they argue, are highly sensitive to the design of the sample due to the variance in scores by type of school, location, size, etc. In rural areas, private-subsidized schools have lower achievements than municipal ones.

²⁰ See Vol. II, Annex I, page 16 of "Chile—Poverty and Income Distribution in a High-growth Economy: 1987-1995."

to have short-term impact on such slow-changing economic indicators as income distribution. This may take one or two generations.

But given relatively equal opportunities at the basic education level, how are income inequality and the gap in educational attainment perpetuated in Chile? Several factors seem to be at play. First, the dropout rate between basic and secondary education is high in the poorest income quintile, as confirmed by the fact that ¼ of youth from that group are not in secondary school.

A second factor is tracking at the secondary level: in recent years, the proportion of students opting for the "technical-professional" stream over the general academic stream has increased rapidly, from 27 percent in 1989 to 46 percent in 1998. The overwhelming majority of these students are from lower-income families. The five areas of specialization in this track—commercial, industrial, technical, agricultural and maritime—emphasize relatively low level skills and effectively preclude students from continuing into the more prestigious universities. De facto, these students are tracked into low wage occupations or, for the 20 percent who continue into tertiary education, into second-rate technical training programs.

A third factor is the persistently higher repetition and dropout rates in secondary schools serving the lower income groups. The retention rate for secondary education is 89 percent in private schools but only 57 percent in municipal schools.

It is interesting to note that, while in Chile public education spending is better targeted than in most countries (with 60 percent of the total going to the 40 percent neediest children, see Annex Table C), in practice the impact may not be commensurate due to a variety of cultural and administrative barriers. As for the Full School Day Reform, from an equity perspective it will have two contradictory effects: on the one hand it will benefit comparatively more children from poor socioeconomic backgrounds. On the other hand, with its investment cost of US\$1.5 billion and annual recurrent cost increase of over US\$300 million, it is creating additional pressure on educational spending. This is due to the need to build additional facilities, feed a larger number of students at school, re-train and hire large numbers of teachers.

Table 2.9: Targeting of Public Educational Spending—Brazil

	Share of Poorest Quintile	Share of Richest Quintile
Bulgaria (1994/95)	17.0%	21.0%
Chile (1996)	34.0%	6.5%
Colombia (1992)	23.0%	14.0%
South Africa (1994)	14.0%	35.0%

Source: World Bank Database

Efficiency: A Strong Suit

Under the military government, public spending for education declined from 4.0 percent of GDP in 1981 to 2.6 percent in 1990. Despite this, student intake grew by 42 percent in higher education²¹, the secondary enrollment ratio increased by nearly 15 points, pre-school enrollments expanded, and nearly all students completed basic education. Clearly the number of students educated per unit of public spending increased greatly over this decade. But whether or not this constitutes increased efficiency depends upon what happened to quality. The general assessment is that on average quality either declined slightly or was stagnant. Thus, there are some grounds for concluding that the market-oriented reforms initiated by the military government were successful in improving the efficiency of public spending on education.

Table 2.10: Public Spending per Pupil by Level of Education
(in 1,000s of 1997 Pesos)

Year	Preschool	Basic	Special	Secondary	Adult	Higher
1983	223	142	149	148	164	1,599
1987	190	131	134	117	118	1,040
1990	204	135	137	117	111	998
1992	205	158	331	150	77	937
1996	290	241	515	249	102	897

Source: MINEDUC, Budget & Planning Division

Part of the story is the mobilization of private education spending, especially in higher education, where it funded most of the enrollment expansion in the 1980s (through the introduction of cost recovery and student loans at public universities). Between 1990 and 1997, private education spending increased further (from 2 percent to 3.2 percent of GDP) mainly in higher education and also as private-subsidized schools were permitted to seek financial contributions from parents under the shared financing arrangement.

However, while average quality may have remained stable in the 1980s, this was achieved at the cost of equity: the dispersion in SIMCE scores widened, as subsidized private schools serving a better informed, better-off population grabbed the opportunities offered by the capitation grant system, while their municipal counterparts serving the most vulnerable children did not benefit from any compensatory programs.

The resulting achievement gap is what led the democratic governments of the 1990s to re-orient priorities towards quality and equity. This commitment, combined with a fast growing economy, made it possible to more than double real public education spending, which from 1990-97 rose from 2.6 percent to 3.4 percent of GDP. As documented earlier, the programs supported by these

²¹ And doubled between 1982 and 1994.

funding increases have resulted in sustained absolute and relative quality improvements. The question is to what extent a different policy mix—a greater private sector role, more reliance on performance incentives, more stringent standards, narrower targeting—could have had more impact per dollar while still being politically feasible? At the macro level, there are no good assessments of the cost-effectiveness of the system to allow the question to be answered with accuracy.

The most recent estimates of rates of return to education in Chile are not surprising for an upper middle income country. They illustrate the importance, from an efficiency as well as equity perspective, of (1) improving the quality of secondary education in general and the relevance of secondary technical-professional education to the skill requirements of the modern labor market; and (2) ensuring that a higher proportion of youth (presently 30 percent) reach tertiary education to ameliorate income distribution, labor productivity, and long term growth prospects.

Table 2.11: Private Returns to Education	
Country	Private ROR
Chile (1998)	
Basic*	5%
Secondary	9%
Tertiary	20%
OECD (1994)	
Primary*	n/a
Secondary	12.4
Tertiary	12.3

Sources: University of Chile, OECD (1998)

*Basic education in Chile spans eight years, while "primary" school in OECD lasts six years.

School Choice: What Can We Conclude From Chile's Experience?

One of the most controversial policies at the time of the military government was the introduction of school choice, based on the theory that competition would drive efficiency and quality gains. Evaluating the policy is complicated by the fact that during the 1980s, its adoption coincided with the restructuring of the system and a fiscal crisis, and that during the 1990s whatever positive impact competition could have on achievement was enhanced by other inputs (materials, improved pedagogy, targeted interventions, shared financing). What has worked or not, and why?

To What Extent Has Competition Increased Quality?

Student achievement and other data from the 1980s—the only period when "pure" competition affects can be observed—show no evidence that average school quality improved, at any level of the education system. And basically stagnant average quality masked a growing learning gap between students from the private-subsidized and municipal sectors. Scores improved for the former, but for the latter experienced a continuous decline. The gap has been steadily closing during the

1990s, especially during the second half of the decade, leading many to conclude that the source of progress is the combined effect of competition, increased investment and targeted programs.²²

Are Private-Subsidized Schools More Effective?

Students in private-subsidized schools test higher than students in municipal schools. However, research shows that the students who attend private-subsidized schools come from higher-income and better-educated families. Espinola notes that 70 percent of municipal school students come from the two lowest-income quintiles versus 45 percent for the private-subsidized schools (see Table 2.12). This suggests that private-subsidized schools are able to select students to a much greater extent than municipal schools can. Although all schools are legally required to admit all students, there is evidence that both private-subsidized schools and elite municipal schools which face excess demand practice screening.²³ Private-subsidized schools since 1993 can ask for financial contributions from families, which can create a barrier for lower-income students. Camoy & McEwan (1999) found that controlling for student background, students in (non-religious) private-subsidized schools perform no better on SIMCE tests than students in municipal schools. However, they also found that students in religious (Catholic) private-subsidized schools perform significantly better than students in both non-religious private-subsidized schools and municipal schools. Even after controlling for student background characteristics, the Catholic schools' performance edge diminished but did not disappear.

Income Quintile	I (lowest-scoring quintile)	II	III	IV	V (highest-scoring quintile)	TOTAL
I (poorest)	32.9	27.3	22.0	14.0	3.8	100
II	23.2	22.3	24.9	20.2	9.4	100
III	18.9	20.6	20.2	23.1	17.2	100
IV	8.7	14.1	18.3	31.0	28.0	100
V (richest)	3.7	8.3	10.8	16.2	61.0	100
% of schools	20.0	20.0	20.0	20.0	20.0	100

Source: Fundación Nacional para la Superación de la Pobreza, 1996 data

²² A recent study by the University of Chile (Bravo, Contreras & Sanhueza 1999) uses PER (1982-84) and SIMCE (1988-97) results to analyze, in an equity perspective, the gap in student learning between subsidized and private schools following the introduction of the capitation system. A number of techniques are applied to reduce (although not totally eliminate) some of the weaknesses linked to the design of the sample and the difficulty of the test over time. By analyzing the tests scores on a percentile basis, the study finds that averages obscured huge differences, with some years showing simultaneously a rise in the average score and a decline in the lowest scores. Inequity indicators worsened throughout the 1980s and started improving subsequently. The distribution of scores show a high concentration of good scores in private schools growing over time as better students have migrated there and of poor scores in public schools being constant over time despite this exodus. Inequity among schools tended to increase in the early years of the period and to decline continuously in the last years, although these trends are not statistically significant. Finally, the performance gap between public and private schools diminishes when socioeconomic and geographic factors are taken into account; in the 1990s it becomes insignificant and in the second half of the 1990s, negative.

Are Private-Subsidized Schools More Efficient?

The evidence is mixed. This was probably the case in the 1980s, when private-subsidized schools had essentially the same per student resources (through the capitation grant) as their municipal counterparts. Student-teacher ratios in private-subsidized schools are typically higher than in municipal schools, for example, although this is also due to the fact that relatively more of the latter are located in rural areas where population density is low. There has been little analysis of the extent to which spending per student in private-subsidized schools has increased as a result of the 1993 shared financing reform (allowing parental financial contributions to private-subsidized schools, which are only partially offset by reductions in the capitation grant). In 1999 parental contributions were equivalent to 37 percent of the amount of the grant. This kind of spending differential, coupled with evidence of a more advantageous student population, could imply that private-subsidized schools are actually less efficient than municipal schools in absolute terms. However, they would still represent a more efficient use of public education resources.

Table 2.13: Monthly Per Student Cost, by School Type (1998)

Type of School	Per Student Cost (Pesos)
Fully Private	110,500 (average)
Private-Subsidized*	Up to 46,000
Municipal	26,000** (average)

Source: P. Gonzalez, in UNDP "20/20," 1999

*An estimated 1350 private-subsidized schools or 15 percent of the subsidized sector mobilize additional funding from parents (1999)

**Broken down as follows: capitation grant=20,000 pesos; other public expenditures=6,000 pesos. The exchange rate in 1998 was US\$1=460 pesos

Mizala and Romaguero distinguish between the concepts of allocative and technical efficiency. Their studies conclude that private-subsidized schools have greater allocative efficiency because they are not subject to the lack of control over staffing issues and the option of deficit financing inherent to the municipal education management and financial system. The private-subsidized schools also have higher technical efficiency, i.e., given comparable inputs, they also achieve slightly better results. How exactly and why (school leadership, student/teacher ratio, more interaction with parents, more testing, etc.), though, is still a subject of speculation and an agenda item for research.

Has Privatization Eased the Pressure on Government Resources?

Yes. This was clearly the case during the fiscal crisis of the 1980s, when public spending on education declined sharply. It is also true in the 1990s, when private education funding (as a share of

²³ V. Gauri (1998) found that 28 percent of students in the subsidized sector of Santiago had taken tests to be admitted in their current schools. Fees, lack of transparency in enrollment procedures, in-school rules and the cost of uniforms are de facto screening devices.

GDP) continued to grow, even though public spending on the sector increased (as a share of GDP) as a result of a strongly performing economy and government commitment to education. Chile's education policies, which have successfully mobilized considerable private investment in human capital formation, have clearly made it possible for the country to achieve more in education per unit of public expenditure.

This should not be construed as a policy recommendation to deliberately reduce public funding in order to stimulate increased private financing. Basic education is fundamentally a public good which in all countries is largely financed out of public resources, whoever actually provides the service.

What Criteria Have Guided Parents' Choice?

The theory underlying school choice models is that informed parents will make rational decisions between competing public/private schools based on quality as measured by achievement scores. The reality in Chile has diverged from this theory in at least three important respects. First, in practice, objective student achievement information has not always been available to guide parents' choice. For most of the 1980s, student achievement scores were not reported by school or made publicly available. Second, as has been pointed out by many critics, in many (and especially rural) areas, low population density effectively precludes a choice of schools.²⁴ And third, even in areas where parents faced a diversity of schools, surveys and focus group studies have found that factors such as school status, peer effects, or "frills" not directly linked to teaching quality, but perhaps suggesting an environment richer in social capital and potentially higher achieving peers, have influenced parents' decisions. (Camoy & McEwan 1999; Gauri 1998). This does not necessarily mean that parents have made a "bad" choice, given the constraints they face. But it does suggest that the most rational basis for a parent's choice of school—school productivity (or a school's ability to produce improvements in student test scores per unit of cost) or "value added"—may not always predominate.

Has Competition Increased Educational Choice and Diversity?

In Chile the evidence suggests that marketization of education during the 1980s did not serve the rural areas, the poor or groups with special needs. Nor, interestingly, does marketization seem to have stimulated significant innovation in education delivery. Initiatives such as "schools for the arts" or secondary magnet schools (the "Montegrande" program) have come from the government during the 1990s, not the subsidized private sector. Many analysts have noted that schools' efforts

²⁴ However, the choice theorists argue that this is a design issue, as government could put low-performing municipal schools up for bids by NGOs or entrepreneurs.

to differentiate themselves and develop market niches concentrate heavily on cosmetic, rather than substantive, factors. Private-subsidized schools appear keenly aware of parental preferences for a traditional type of education and such visible factors as an English name or uniforms. Gauri (1998) notes that private-subsidized schools are in many ways more similar to municipal than to fully private schools, because the constraints are cultural and institutional, not just bureaucratic.

Can Chile's School Choice Model be Replicated?

As pointed out by Winkler and Rounds (1993), a number of conditions facilitated the introduction of school choice in Chile. To what extent would they be found elsewhere? First, the country had a tradition of public support to private schools (dating back to the 1950s); although this is a relatively common situation worldwide. Second, the policy was designed and implemented in an authoritarian setting that did not permit political opposition. The suggestion that it could not be emulated in a democratic context is belied by examples of countries such as Colombia, the Netherlands or New Zealand, but borne out by the difficulties experienced by Mexico as it seeks to introduce market reforms into higher education. Third, local managerial capacity was comparatively better than in most other industrializing nations. Finally, the country enjoyed a low incidence of corruption, a relatively strong audit capacity and good statistical and assessment systems.

In summary, the Chilean case confirms the experience in other countries that while competition is healthy and can promote increases in efficiency, *in and of itself* it will not necessarily increase quality or equity. For these goals, complementary instruments (or incentives) designed to change classroom practices and focus resources on the most vulnerable are needed. Further improving the voucher system could help. But exclusive reliance on a market approach is unlikely to work.

Institutional Modernization: The Oft-Postponed Challenge

Although President Frei launched a "reinventing government" initiative in 1995, due to more pressing priorities and a lack of political readiness, the modernization of educational institutions has repeatedly been postponed.

The Decentralization Agenda: A Matter of Alignment

Compared to many countries, the Chilean decentralization process could be considered a success. The introduction of Regional and Municipal Plans is a case in point. However, the sophistication of the FSD reform calls for more smoothly functioning local institutions.

One of the issues is a persistent deficit in municipal education budgets, a source of friction with the central government. It can be attributed to three factors: an inadequate analysis of the fiscal and skills requirements of decentralization in 1980; insufficient attention to the development of local

leadership and management capacity, as training was suspended in the 1980s and concentrated on pedagogy in the 1990s; and the expenditure increases triggered by the Teacher Statute in 1991.

A second issue is that the "municipalization" process of the early 1980s also created for the schools a split governance structure, which has been a source of inefficiency and of confusion. Roles and responsibilities were not always clearly defined, resulting in administrative duplication as well as "empty" layers.

Finally, the educational decentralization process has been described as incomplete or asymmetrical. It was stopped at the municipal level in 1980,²⁵ and the decision-making powers transferred to the schools during the 1990s are concentrated in the curricular and pedagogical spheres. Teachers are managed by municipal governments and only a tiny percentage of mayors has agreed to delegate financial management to schools as authorized by law. Indeed, repeated quality initiatives²⁶ proposed by MINEDUC which require school-level flexibility have been frustrated by the resistance of local governments to "letting go," by the weak capacity of school directors, and the failure to manage the teaching force. Quality is a holistic concept, and the split governance as well as the lack of opportunities for integrating managerial and pedagogical concerns may limit the scope for full school renewal and slow down the emergence of a class of modern school managers.

Institutional Fragmentation: From Walls to Bridges

The use of the project format to un-bundle managerially complex tasks, "silo thinking" reflecting a hierarchical tradition, and strong program identity, reinforced by the lack of a common language between different professional groups, all have contributed to the existence of a compartmentalized education system and ministry. This has been at odds with the team-and network-based, cross-disciplinary and participatory approaches advocated in the 1990s. Overcoming these cultural barriers became critical with the need to create synergy between the many, old and new, components of the all-encompassing FSD reform in 1996.

Weak Information, Communication and Participation

Until recently this fragmentation was exacerbated by a poor flow of information, both internal and external. SIMCE scores only became public in 1995. It took many months for the messages of the 1996 reform to be communicated clearly in terms of the societal changes announced in the Brun-

²⁵ For the military government, the municipalization of the school system was a transitory step towards full privatization.

²⁶ Examples include the establishment of resource centers and the operation of secondary level extracurricular activities.

ner Report. The design of the FSD reform, emphasizing the substantive, was based on expert inputs and the concept of participation remained "front-end" i.e., formalistic and controlled until the 1997 consultation on secondary education curriculum. Today there is growing concern that under radical interpretations of the "Freedom of Education" concept by private providers, school admission and operating rules are hardly transparent and children's "Right to Education" is not enforced forcefully enough. Information availability remains asymmetrical between schools and parents. Most observers agree that these deficiencies unnecessarily slowed down initial public embrace of the FSD reform and its impact.

"Soft" Quality Assurance and Accountability Mechanisms

Chile already has, or is in the process of establishing, most of the elements of a quality assurance framework: national curriculum, universal student assessment, educational statistics, EMIS, teaching standards, accreditation programs, growing use of client surveys. The on-going challenge is to move from the concept of educational "accounting"—reporting assessment results, complying with rules—to a culture of educational "accountability" in which all stakeholders proactively keep their eyes on the goal, systematically cross multiple sources of information, focus on intra as well as inter-school differences, demand improvement (in the case of parents) and take action to that effect (teachers). At both ends of the political spectrum, there is still nostalgia and finger-pointing. A culture that celebrate and rewards successes is already in place but there is room for increasing the "demandingness" of the system.

How Do Chilean Educational Reforms Compare With Those of Other Countries?

This section looks at the education reforms implemented to date in Chile in a broader international context, focusing on two policy clusters: (i) choice and demand-side financing; and (ii) decentralization and accountability.²⁷

Choice and Demand-side Financing

Universal vs. Targeted Coverage: The Netherlands and Chile are the only two nations in the world with a universal capitation grant system, i.e., applying to all students and to public as well as private schools. As in Chile, in the Dutch system public and private schools are government-funded on an equal footing. The role of the private sector in Holland is more extensive than in Chile, with 70 percent of the schools privately administered.

All other demand-side financing systems in existence across the world are limited in scope, usually targeted to poor children, groups with special needs or differentiated by type of school. In the U.S., for instance, the number of children in voucher programs amount to only 0.1 percent of the total (0.5 percent if charter schools, another market approach to education, are included), although there is growing interest in both of these approaches on the part of inner city parents. The two best-researched publicly funded voucher experiments—the Cleveland (Ohio) Scholarship Program and the Milwaukee (Wisconsin) scheme—focus on low-income students. This was also the case of Colombia's secondary education voucher program (since disbanded). Other targeted populations have been girls, especially in rural areas (e.g., Pakistan), particular ethnic groups (e.g., Mexico), or vulnerable age groups such as pre-schoolers in Spain.

In New Zealand capitation funding is available to public schools and "integrated" schools (i.e., parochial schools that comply with government standards regarding the curriculum, teacher qualifications and remuneration, inspection by the Education Review Office, etc.) Funding equivalent to 30-40 percent of the capitation amount is available to elite, strictly private schools who also agree to

some degree of compliance. Schools that refuse to apply the national curriculum are not eligible. An interesting feature of the New Zealand funding formula is that the capitation amount a school gets is adjusted for the average socioeconomic status of students in that geographic area.

Many other OECD countries provide funding assistance to private schools, but this is usually under contractual arrangements rather than as an automatic capitation grant. These include Australia and Canada, England and France, Japan and Poland.

Payment to Parents Rather Than Schools: This is, in theory, the difference between a voucher and a capitation grant system. A voucher, being portable, offers more flexibility to recipient families. In practice, under both models the funds are usually paid to the schools, except in the case of scholarships designed to keep children in school (Brazil for poor children, Indonesia for junior secondary students, Morocco and Mozambique for girls).

Sweden is one of the few known cases of grants to families rather than to schools at the basic education level. There, in principle the money follows the student, although the degree of enactment varies from one municipality to the next. In the municipality of Nacka, for instance, parents are provided with a voucher to be handed over to the school of their choice and with a directory of each school's location, aims, pedagogy, organization, and opportunities for participation in the decision-making process. Schools compete proactively for clients, especially as the voucher has to be renewed at regular intervals.

If Chile wishes to move in the direction of greater differentiation in the amount of the capitation grant based on students' socioeconomic levels, a relevant model might be New Zealand. The targeting of schools in that country is based on a grid crossing Census and Internal Revenue data (not data generated by the education system) and taking into account family income, ethnic characteristics, and other quality of life variables. Schools are classified on the basis of where the average number of inhabitants in their geographic area fall in this decile index, irrespective of the actual student population makeup in the school. The ratings remain fixed for the entire intercensal period. While the targeting is not perfect (a high-income child could attend a low decile school and bring to that school a high capitation grant), the reporting is fairly accurate because it is based on data collected for purposes other than determining eligibility for education grants. Transaction costs are low, as are the risks of information distortion, and the system is transparent because the unit value of the grant is clear and stable for a number of years.

²⁷ Based mainly on Patrinos (2000); Leithwood, Edge & Jantzi (1999); and OECD (1993).

Student Selection Process: One criticism of the Chilean choice model is that "private subsidized schools have improved their scores by selecting better students rather than by changing their practices" and that "it is the schools, rather than the parents, who can choose." This has contributed to a "right to education" problem for children from lower socioeconomic status, who may not be able to meet a desired school's test standards. The Milwaukee scheme has addressed this equity challenge by providing that if a school is oversubscribed, students will be randomly selected from the applicants. If it is not oversubscribed, the subsidized school is required to accept all who apply, with only minimum exclusions. In recent tests, voucher students in Milwaukee scored 11 points higher in mathematics than their counterparts in urban public schools.

School Eligibility Criteria: Some countries regulate access to their demand-side financing schemes by type of schools: in Scotland, for instance, students can choose only between public schools, while in some United States, the choice program is restricted to public and non-sectarian schools. Other nations, like Chile, establish criteria and support any school meeting them, regardless of their religious orientation. This is the case for Australia, for Denmark—where two-thirds of the students are in private schools—the Netherlands and New Zealand.

Consequences of Under-performance: One argument in favor of marketization is that, in theory, failing schools, like firms, will not be allowed to continue operating. Some nations have taken strong measures to that effect. In England, the local councils put failing schools up for bids by the private sector. In the Netherlands, emphasis is on a 2-3 year "accompaniment" of the corrective process. In the US, 31 States have sanction provisions in effect: academically bankrupt schools or districts first receive technical assistance and on-site monitors or conservators. If they fail to improve, they may be taken over by the State authorities, lose their local governance, or face closure or "reconstitution" with new directors, new faculty, reassigned students, and financial penalty. The impact of these measures over the short and medium term is a hotly debated topic.

Decentralization and Accountability

While educational decision-making is some times decentralized for ambiguous or non education-related reasons—e.g., fiscal crisis in the central government or power consolidation—many nations with centralized systems have moved in this direction because it is recognized that decisions that are "owned" by the stakeholders will be better implemented. Experience suggests that devolution (the transfer of decision-making power to lower levels of governments) works marginally better than deconcentration (transferring these decisions to local units of the education ministry). As we have seen, the Chilean decentralization contains elements of both.

Locus of Decision-making. In Chile, the management of schools, their financial resources and personnel, is vested in municipal governments. Schools have curricular and pedagogical autonomy; as seen before, by law they can also be delegated the right to manage their budget, but very few mayors have taken that step. Many, including in the Chilean MINEDUC, feel that decentralization is incomplete.

By comparison, in 1991, out of 14 nations surveyed by OECD, Ireland and New Zealand were by far the most decentralized systems, with three-fourth of the decisions made at school level (salary decisions and standards remain a central responsibility). In four Nordic nations and three federative countries (including the U.S.), three-fourth of decisions were made either at the school or the intermediate level. The intermediary and national levels still played an important role in countries such as Spain and France. The intermediary levels had no role in Portugal but were the key players in Switzerland. In most countries, private schools enjoyed a much higher level of decision-making than public schools.

School-based Management. School-based management is the most radical form of decentralization, when a majority of decisions in all traditional areas—governance and choice, finance, curriculum and pedagogy, resource management and can be made by and in the school. As can be seen from the table below, Chile's model is less decentralized than those of many other nations/regions. A similar LAC table would show that several other nations (e.g., El Salvador, Minas Gerais in Brazil, Nicaragua) enjoy similar higher degrees of school-level decision-making power than in Chile.

Decentralization and market approaches place greater skill requirements on administrators, school managers and teachers and assumes certain conditions which are not always present in less developed nations. For instance, giving schools their own budget to purchase technical assistance in replacement of the old inspection service, as done in Australia, New Zealand and the United Kingdom assumes to existence of providers. Chile is closer to that situation than most less-developed countries.

Additionally, the impact of school-based management on student learning has been shown—at least in the United States—to depend on the degree to which staff decisions are explicitly motivated by a search for student learning improvement and not mainly by other goals such as teacher welfare.

Table 3.1: Degree of School-based Management in Selected Countries

Functions	Country				
	Chile	England	The Netherlands	New Zealand	U.S. Chicago
•Governance -School councils elected -Councils select school director	✗ ✗	✓ ✓	✓ ✓	✓ ✓	✓ ✓
•Choice -Parents select school -School sets admission requirements	✓ ✗	✓** -	✓**** ✗	✓ ✓	✓ ✓
•Finance -Funding follows students	✓	✓***	✓	✓	✓
•Pedagogy -Set the non-core curriculum -Choose pedagogical approach	✓ ✓	✗ ✓	✓ ✓	✓ ✓	✓ ✓
•Resource management -Develop school improvement plan -Allocate non-personnel budget -Selection of textbooks	✓ ✗* ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓
•Personnel management -Hire and fire school director -Hire and fire teachers -Set teacher salary scale -Assign teacher responsibilities -Schools purchase professional development	✗ ✗ ✗ ✓ ✓	✓ ✓ ✗ ✓ ✓	✓ ✓ ✗ ✓ ✓	✓ ✓ ✗ ✓ ✓	✓ ✓ ✗ ✓ ✓
•Information -Independent public audit or inspection -Public test scores -Public measure of value-added	✗ ✓ ✓	✓ ✓ -	✓ ✓ ✓	✓ ✗ ✗	✗ ✓ -
•Incentives -Director job security linked to student performance -Teacher job affected by student performance	✗- ✗	✓ ✓	✗ ✗	✓ ✓	✓ ✓

Source: Various LACSHD documents

Legend: ✓ - yes; ✗ - no; - not applicable

*Authorized by law but seldom done in practice

**Among public schools only

***Funding formula takes into account the number of students

****Among public and private schools for the Netherlands, New Zealand and Chicago

Decentralization and Accountability. Unless school autonomy is balanced with accountability, there is a risk that schools may be complacent and/or serve the goals of the community only and not those of the nation as well. Furthermore, with global competition and the concern for efficiency in the use of tax money, accountability is likely to endure. The Chilean school model, perhaps because the powers it gives to the schools are moderate, does not make full use of accountability mechanisms introduced in other parts of the world.

Advanced forms of school-based management can be found in Australia and New Zealand under the name of "new managerialism" which combines it with deregulation and delegation. These reforms emphasize a shift from process to output controls, management and institutional design, and organizational differentiation of schools. School directors are accountable to the authorities for efficiently meeting the goals agreed with the school board of trustees.

Market Approaches to Accountability. Chile was a pioneer in breaking the monopoly of public schools by introducing competition from the private sector, opening boundaries across municipal systems, altering the funding system, publishing school results; in 1996 it also introduced the concept of magnet schools through the "Montegrande" project which funds on a competitive basis secondary schools with a particular innovative pedagogical or managerial "theme." A number of countries (Australia, England and the Netherlands, Canada, the US, New Zealand and parts of Asia) have gone further in encouraging a diversification of the supply of schooling services through the creation of charter schools, academies and other specialized educational facilities. In these schools, the "customer" determines what the information should be. For instance, charter schools—public schools which are freed from certain regulations against a commitment to deliver agreed results—may well emphasize specific values as part of their promise of delivering quality outcomes. This has the advantage of "pulling together" the participating communities.

Professional Accountability and the Standards Movement. Another strong reform movement believes that teachers and school administrators are key to the improvement of school outcomes. The thrust of it is that the authorities agree to lessen regulations on teaching while the profession agrees to tighter quality control of teacher competence at entry through the accreditation of teacher preparation programs, rigorous licensing/certification procedures, and voluntary advanced certification for experienced teachers. Thus, teachers define the meaning of quality and take responsibility for ensuring it as befits a modern professional association. This movement is particularly robust in countries such as Australia and the US, where the teaching profession has reached a level of maturity not yet present in Chile. While these reforms are close to those of Chile in the 1990s in the emphasis they place on teachers, the initiative in Chile was taken by the government, while the Union remained traditional in its corporatist posture. This has begun to change lately, although MINEDUC has remained in the lead role, involving the Union in the definition of teaching standards with Australian technical assistance.

The Management Approach. Found in England as well as other parts of the world such as some U.S. states or Canadian provinces, this approach focuses less on structural changes than on value-added, on making schools more strategic in their goals and more data-driven in the means to reach them. The tools used are controls: control of inputs such as teacher competencies and the

(national) curriculum; control of processes through program specifications, performance appraisal systems, merit-pay and a variety of planning strategies; control of outputs through the setting of student standards and testing to ensure consistency across or within jurisdiction. School inspection by autonomous bodies as found in the United Kingdom, Scotland and New Zealand represent attempts at controlling/ monitoring all three dimensions, based on multiple indicators. In England, standards and accountability are found at every level of the system, and accountability is based on parental empowerment and "whole school" inspections.

Some reformers in Chile are advocating similar approaches, although back home they have been surrounded by controversy. Mobilizing parents as "watchdogs" on school governance boards has been difficult in England; in Chile, while feasible, for the historical reasons mentioned early in this report, it would require a determined and sustained effort. As for external inspections, although recognized as bracing, they have been criticized as being too cut off from the reality of schools. In England one finds a striking contrast between the dynamism of the reform movement and teachers' low morale and level of anxiety; this can be traced to the blame placed on teachers by the Thatcher government and concurrent image deterioration, the rapid changes in the teachers' culture where autonomy has been replaced by accountability and reform overload. Not unlike the democratic governments of Chile, the Blair Administration is trying to preserve the positive aspects of the previous administration while regaining the trust of the profession.

Lessons from the Chilean Experience**Successes**

The education strategies adopted by Chile in the 1980s and 1990s were philosophically and operationally very different. However, all have earned Chile the label of "innovator" among developing and industrialized countries in the areas of education finance, management and pedagogy. Furthermore, the country followed an unusual strategy of change within continuity. The cumulative impact of one of the world's longest-running and most ambitious reform sequences has generated considerable food for thought. This section summarizes some of the key lessons other countries can derive from Chile's experience.

Lesson 1: Policy continuity in the pursuit of core education goals pays off

- Chile has demonstrated an impressive ability to reassess and continuously build on previous policies, in contrast to the wholesale repudiation of previously launched reforms that characterizes changes of government in most other countries.
- During the past decade, there has been a high degree of stability in the education technical team across the two democratic administrations.
- Successive education ministers have steadily pursued the core goals of quality, equity and efficiency, using evaluation data to assess progress objectively.
- Education ministers also have been able to integrate the education agenda with the core macroeconomic policy agenda and to gain national political support for increases in education spending.
- An exogenous factor which also has contributed to Chile's educational progress is the country's strong fiscal and macroeconomic performance from 1987-97, with real per capita income growth averaging 7 percent per year. This allowed the government to undertake costly, long-term

investments in human capital formation and to maintain this commitment even when climate vagaries and the Asian crisis of 1997 put pressure on fiscal resources.

- Finally, in part because of the progress it has been able to demonstrate, the education sector also has enjoyed highly visible political support from both the presidency and the Ministry of Finance throughout the 1990s: in the public discourse, in the flow of resources, in daily events showcasing education and in weekly visits to the most humble schools.

Lesson 2: Structural reforms of system governance—school choice and decentralization—are not enough

- Chile's bold structural reform of education system governance in the 1980s constitutes the longest-running and largest-scale test of a capitation grant or voucher system yet implemented anywhere in the world. Although the political context for this experiment is clearly not transferable to other countries, Chile's experience with demand-side financing of public and privately managed schools does permit some cautious conclusions:

- The introduction of school choice appears to have positively stimulated system efficiency (average student learning achievement over the decade was stable, despite a sharp drop in unit costs) and parental satisfaction (some 30 percent of students exercised choice and shifted from municipal to private subsidized schools over the decade).
- It is impossible to say whether school choice in and of itself is very effective in stimulating improvements in school quality, because it is difficult to extrapolate what might have happened to average school quality and student learning outcomes in Chile if government spending on primary and secondary education had not declined precipitously following the 1981 reform. There is interesting evidence from surveys, however, that factors other than student achievement influence (or distort) parents' choice of schools. This suggests that the competitive pressures generated by a choice system may not necessarily maximize school academic quality. This is a crucially important area for further research.
- In the absence of compensatory actions, school choice systems can adversely affect equity, because choice is not universally available *de facto*. Chilean parents, especially in rural areas (where the population density was too low to make multiple schools economically viable), often had no real alternative to municipal schools, even if these were underperforming.
- The legal system was well established in Chile, and corruption was low. Government audit capacity was strong. These are necessary conditions for success in implementing a capitation funding system.

Lesson 3: Quality requires an explicit focus on the "inner workings" of schools

- Chile's experience suggests that governance reforms can create stronger incentives for efficiency and quality, but market forces alone may take some time to produce actual improvements, particularly in system quality, and may never be sufficient in the case of vulnerable groups. Complementary policies and programs explicitly focused on the inner workings of schools and played a key role in stimulating more rapid and evenly distributed improvements in school quality and student learning in Chile.
- The micro change strategy initiated in 1990 focused on the "black box" of the classroom. Key elements have been:
 - Systematic efforts to break teachers' isolation and promote professional exchanges and reflection on practice through the creation of a variety of *teacher networks*. Chile has been notably successful in assisting teachers from different schools to work together, especially in remote rural areas
 - Programs to stimulate school personnel to work as a team to diagnose their problems and identify possible solutions, such as the *competitively funded school improvement projects* (PME), regular school-level feedback on *standardized tests of student learning achievement* (SIMCE), and whole-school evaluations and *performance awards* (SNED)
 - High-quality, continuous *professional development* opportunities for teachers, designed by the ministry in collaboration with local universities, emphasizing a child-centered approach ("every student can learn"), encouragement of self-paced learning and higher order thinking among students, and the use of diversified teaching strategies
 - Attention to schools' capacity to absorb change, reflected in such things as the shift over time from direct provision of classroom materials to schools' independent selection of books from a ministry-approved catalogue, combining a needs-based approach with low-cost, centralized bulk purchase. The 1996 extension of the school day is another example of gradually increasing expectations being placed on the school system, as capacity improved.
- Virtually all of the major programs designed by Chilean education authorities in the 1990s are in line with—and in some cases anticipated—education research findings from OECD countries over the past decade. Similar approaches focused on the "instructional core," relations within the

school, and the school's links with its community are now being adopted in many other places. Chile's story provides some evidence that the best way to generate quality is through a combination of adequate inputs and professional learning communities, organized around shared goals to improve student learning, differentiate teaching strategies and increase accountability.

Lesson 4: Well-targeted programs can improve equity

- Bearing in mind the limitations of SIMCE, Chile's progress in closing the achievement gaps between municipal and private subsidized, and between urban and rural schools in a relatively short space of years in the 1990s holds important lessons for other countries. Most analysts credit the early introduction of programs tailored to the special needs of particular vulnerable groups: formal and informal early childhood and pre-school programs, MECE-Rural for multi-grade schools in isolated rural areas, P-900 for at-risk schools, and special education, where real spending per child more than quadrupled.
- These programs, which are complemented by free meals and snacks for poor children to enhance readiness-to-learn, are holistic, seeking to provide the key ingredients of quality: specially designed materials, pedagogical practices emphasizing attention to diversity, teacher networks, linkages to the community, and intensive, focused system support through specially trained supervisors. They even include specific activities to compensate for a culturally deprived environment.
- In the better-off private subsidized schools which charge fees, scholarship funds were introduced to mitigate social segmentation.
- Although the agenda is far from completed, due to deep cultural barriers, administrative and social rigidities, the Chilean model of "positive discrimination" ranks among the more thorough to date in the developing world.

Lesson 5: Using student assessment and evaluation data to guide policymaking increases program effectiveness

- Chile is exemplary in the developing world in the priority education authorities have given to regular, standardized student assessment as a source of feedback on system performance. SIMCE has been used as a tool to track and correct gaps in learning between different groups or regions. It has played the role of a compass in the open and flexible approach to reform adopted during the 1990s and has become even more critical to strengthen accountability in the context of the ambitious 1996 Full School Day reform.

- The SIMCE has been continuously refined. Its limitations in an increasingly competitive and complex environment are recognized by the Chilean authorities. The SIMCE is presently under review again, including the sensitive outsourcing option. Its results are public, they allow inter-school comparisons as well as intra-school improvement, and weigh heavily in the SNED system of merit awards to schools. The country also participated in the follow-up round of the Third International Maths & Science Study (TIMSS) and the UNESCO/OREALC study of learning achievement across Latin America, for benchmarking purposes.
- To complement the SIMCE the government regularly commissions high quality evaluations, conducted by the most prestigious national universities and built into every program. Initially they were mainly on a summative basis, but more recently the ministry has come to recognize the advantages of formative evaluations as inputs for mid-term program corrections.
- This is well illustrated by the SNED, a system of biannual awards to the best performing schools, which was subjected to an in-depth evaluation after each of its first rounds, in 1996 and 1998. The evaluations generated valuable guidance for the next round. As a result, Chile can now boast one of the most promising performance reward systems in the world: one that is based on fair competition, encourages teamwork among teachers, and serves as an incentive for behaviors the reform wants to promote, such as ensuring more equal learning opportunities for students.
- The SNED has been gaining acceptance, demonstrating how even as controversial an approach as merit awards to schools can have an impact on outcomes if its design and implementation are systematically informed by quality national and international data.

Lesson 6: Rethinking public and private roles can expand and help optimize investment in education

- Chile has gone farther than perhaps any country in the world to redefine the roles of state and market in education. The radical step taken by the military government in 1981 to separate the financing from the provision of basic education is unique among developing nations (and only the Netherlands among OECD countries has a similar nationwide system of school choice). The impact that these policies have had on system efficiency was discussed above. A second major impact of Chile's "marketization" of education—particularly in higher education—is the mobilization of substantially increased private resources for education.
- Fees introduced in public higher education in 1982 (accompanied by means-tested student loans) and the policy allowing subsidized private schools at the primary and secondary levels since 1993 to charge fees, have expanded total education financing by tapping the willingness to pay of the better-off. The contribution of the private sector to education finance as a share of GDP today

is virtually equal to that of the government (3.2 vs. 3.4 percent of GDP), and sums to a very high (6.7 percent of GDP) level of total education spending by international standards (the average for middle-income countries in LAC is 3 percent of GDP). Few analysts believe Chile's total education spending would be as high today in a publicly dominated system.

- Chile's separation of education finance from provision has not meant an abdication—or even diminution—of government responsibilities in education, however. Quite the contrary: much of Chile's success reflects an effective combination of state and private forces. The Ministry of Education plays a strong role in quality assurance and protecting the vulnerable. It does this through stewardship of the national curriculum (70 percent national, with 30 percent local variation); ensuring ongoing assessment, evaluation and research; funding targeted programs to redress inequities; supporting teacher standards, certification and professional development; and managing special programs to stimulate quality. The ministry does not hesitate to use centralized approaches when these offer significant economies of scale, as in the purchase of high-quality textbooks, which has pushed down the unit cost to US\$3 and continuously raised publishers' standards; or in the negotiation of special rates with the Telecom system and of computer donations from the private sector for the ENLACES program, against a ministerial commitment to provide software, training and maintenance.

- One of the most important lessons from Chile is that ideological solutions from either end of the political spectrum are less effective in dealing with the complex challenges of quality, equity, and efficiency in education than a willingness to mix and redefine the roles of the state and market in innovative and pragmatic ways.

Unfinished Agenda

Chile's reform experiences of the last two decades merit widespread attention, as there is much that other countries can learn. But Chilean authorities and education researchers would be the first to acknowledge that their system is still far from perfect. Indeed, as noted above, Chile's appetite for ongoing evaluation and progressive innovation is another key driver of its educational progress. The ministry's current institutional focus is on three challenges:

Creating a genuine "learning organization" to overcome institutional fragmentation

Just as it broke teacher isolation by establishing professional networks, the ministry is now engaged in the slow process of transforming itself into a "learning organization" in order to overcome its institutional fragmentation.

In recent years, quietly, a variety of information-generating systems have been upgraded to complement the SIMCE: the ministerial Management Information System; the Inter and Intra-net system; Public Information Offices; participation in the OECD and UNESCO indicators and statistics programs; setting up a Knowledge Management Unit and network; and conducting internal and external surveys. These tools are already helping the sectoral leadership make better informed decisions. When fully operational, they will be accessible to all ministry personnel and eventually to all schools, feeding the national conversation on quality.²⁸

More than technical, however, the real challenge is about nurturing among staff a culture of continuous enquiry, promoting vertical and horizontal, inter-unit and cross-disciplinary exchanges of information, and improving communication, so that educators understand the concerns of economists (and vice-versa) and are ready to negotiate with them. Ultimately, all the networks should link up to form a community of practitioners capable of consolidating the shared vision and taking on the job of continuously preserving and enriching it.

Quality Assurance

A "learning organization" is one of several strategic weapons to achieve system-wide coherence. But it is not enough.

The ministry's quality assurance framework still needs deepening. By the end of the 1980s, Chile had an accountability system that gave schools some degree of autonomy in the use of resources, allowed parents choice and exit decisions, provided some aggregate measures of system quality (SIMCE) and relied on a system of physical checks by inspectors for the payment of the capitation grants (vouchers) to schools. During the 1990s school autonomy has been increased, school-level performance information made publicly available, and an "accountability support" infrastructure—training, information, technical assistance, positive incentives—developed at the ministry level. Less has been done in the way of "accountability interventions." With mounting societal demands for quality and equity, the ambitious 1996 Full School Day Reform, and recent concerns with sustainability, Chile has only started the path leading from "educational accounting" to "educational accountability."

The next wave of reform, in the eyes of ministry staff, should aim at raising the "demandingness" of the education system further. This will require tightening existing building blocks, such as accreditation, testing, and review of school development plans and school-based projects. It may require new instruments, such as comprehensive, qualitative, school-level reviews, as in New Zealand and

²⁸ The ministry also needs to reactivate educational R&D, which between 1990 and 1997 was allowed to decline from 9 to 2 percent of educational spending.

the United Kingdom (but in a format that emphasizes support over sanction). Standards will have to be gradually raised, ensuring that they are both realistic and challenging enough to put the system on a continuous improvement mode. And, ultimately, the government will have to face the difficult issue of what to do with persistently failing schools, perhaps adopting variations around the approaches used in other decentralized systems (Chicago, Kentucky, the Netherlands, the U.K., New Zealand); these include putting such schools under the oversight of a distinguished educator or under probation, and eventually "restructuring" them through the appointment of new managers and teachers. For a system such as Chile's where a significant share of the schools are legally "private," such steps—however necessary—is likely to present challenges.

Greater social control to reconcile public expectations for more democracy and more accountability

One anomaly of Chile's education system is that while the system grants parents substantial "choice," neither they nor the broader community today enjoy a strong "voice" in the schools. The evidence from a multitude of countries around the world suggests that direct parent and community involvement in school governance is positively correlated with school improvement (although, of course, these systems do not have school choice). School Councils are about to be piloted in Chile where, until now, directors and teachers have resisted the idea, parents have not been forthcoming and the municipal governments have done little to build up democratic school leadership. Experiments in Latin America (El Salvador, Minas Gerais, Nicaragua) and elsewhere (Chicago, the Netherlands, the State of Victoria, Australia) suggest that a well-balanced school level governing body is healthy from a participation perspective and can strengthen educational quality, as long as directors and council members are properly trained and have the information they need.

A similar trend is to increasingly involve another legitimate stakeholder—teachers—in quality assurance. As a first step, Chile has invited teachers—university academics, practicing teachers, and union representatives—to participate in the definition of teaching standards. Experiences worldwide—e.g., New South Wales (Australia), or Ontario (Canada), or the U.S., where teacher standards have been entirely developed by the profession itself—demonstrate that this avenue, although occasionally bumpy, is the most promising one for a government to progress from a confrontational mode with an industrial-type union to a partnership with a professional association interested in issues of quality along with the working conditions of its members.

Political Accountability

Another facet of the accountability challenge has to do with the fact that the mixed nature of the Chilean education system (with market and social policy elements, vertical and horizontal tensions) has generated conflicts between political and economic signals. As noted by Gauri (1998), the fact

that a high proportion of children attend out-of-municipality subsidized schools reduces the pressure on elected officials to improve the quality of those schools under their responsibility. The exit of the elite from the public system (as in many other countries) has further contributed to this failure to exercise voice, because their children are not affected. The fragmented governance discussed earlier has inhibited the circulation of different types of information which should be crossed to optimize sectoral management. Aligning policies, instruments, institutions and organizations on the stated goals is one of the golden rules of education reform.

Conclusion

The road to reform in Chile has been neither straight, nor smooth or painless. But the result is one of the most innovative, cost-effective and comparatively equitable education systems in the developing world. Far-reaching changes have been introduced in what is taught and how education is delivered. Most of the instruments of a modern education system—transparency, student assessment, a flexible curriculum, targeting, investment in quality inputs, attention to classroom processes, continuous professional development and school autonomy—are present in Chile's system and have been present longer than in most other countries, including some OECD countries. And the system is still evolving.

The gift of today's Chile to the world education community is twofold. In areas where it has been particularly successful—mobilizing public and private involvement based on comparative advantage, investing in the inner workings of schools, using assessment to guide decision making—it offers, not a model, but proof that significant change is possible in education and concrete avenues for implementing it. In areas where the agenda is still unfinished—equity and the modernization of educational institutions—its efforts and the difficulties it is groping with are substantive contributions to the international debate on such issues as secondary level tracking, effective governance, regulation and enforcement mechanisms in a decentralized system, the role of the state and public participation in the process of change.

The key lesson from the Chilean story is that, ultimately, to be successful—to have an impact on learning for all, go to scale and be sustainable—reform requires linking macro-level instruments (incentives, financing and governance structure) with the micro level (school and classroom processes). Recognition that no single set of tools will do was the de facto agenda of the 1996 FSD reform. Dealing with the complex challenges of quality, equity and efficiency in education requires pragmatic solutions: developing what works and dropping what does not, always guided by objective measures of progress and performance. Reinventing education systems to meet the needs of a 21st century global economy requires results-oriented bipartisanship and innovative use of both the public and private sectors—actions Chile has pioneered. The pragmatic story of two decades of education reform in Chile holds lessons for education systems across the post-modern world.

Annex

Annex Table A: SIMCE Results 1988-1996

Type of School/ Discipline	Grade 4					Grade 8					Secondary Education			
	1988	1990	1992	1994	1996	1989	1991	1993	1995	1996	Sciences/ Humanities		Voc./Tech.	
Math														
Municipal	48.30	56.20	63.70	65.41	67.80	51.54	48.48	52.88	54.28	59.49	39.92	42.97	37.87	39.64
ubs.-Private	54.70	63.20	69.60	71.39	73.10	56.19	54.47	57.63	59.94	65.34	47.04	51.58	37.96	40.79
Private	73.30	80.10	85.30	86.44	85.60	76.03	72.10	74.73	77.51	80.86	63.51	67.90	48.12	40.10
oc./Tech.											*	*	*	43.97
Spanish														
Municipal	50.20	57.20	64.00	63.44	68.20	52.99	51.80	55.12	55.85	62.15	50.72	57.97	50.85	56.38
ubs.-Private	58.00	54.40	70.70	69.93	74.20	58.85	56.99	61.11	61.11	68.41	58.27	66.49	50.36	57.44
Private	79.00	80.80	86.80	83.69	86.10	76.73	72.61	76.80	74.63	80.39	69.56	75.51	67.19	61.90
oc./Tech.											*	*	*	59.97
Average														
Municipal	49.25	56.70	63.85	64.43	68.00	52.27	50.14	54.00	55.07	60.82	45.32	50.47	44.36	48.01
ubs.-Private	56.35	58.80	70.15	70.66	73.65	57.52	54.73	59.37	60.53	66.88	52.66	59.04	44.16	49.12
Private	76.15	80.05	86.05	85.07	85.85	76.38	72.36	75.77	76.07	80.63	66.54	71.71	57.66	51.00
oc./Tech.											*	*	*	51.97

* Not given the test

Annex Table B: Student Achievement, Socioeconomic Status and School Costs in 1994-96

Unsubsidized	Municipal Schools	Voucher Schools		Elite Private
		Non-religious	Catholic	
Mother's schooling (years)	7.5	9.3	10.7	14.2
Father's schooling (years)	7.7	9.6	11.2	15.4
Monthly family income ('000 pesos)	165	288	302	1117
Annual unit cost ('000 pesos)	430	393	493	731
Raw difference in student achievement (over municipal schools)				
•Math score	-	3.2	10.0	18.0
•Spanish score	-	3.9	11.4	18.6
Difference adjusting for household factors				
•Math score	-	-0.9	2.7	4.7
•Spanish score	-	-0.8	3.2	4.3
Difference adjusting for household and school factors				
•Math score	-	0.6	2.6	5.1
•Spanish score	-	0.6	3.0	4.9

Source: McEwan and Carnoy (1999)

Annex Table C: Education Spending by Income Quintile, Education Level & Program							
Level of Education	Program	Income Quintile					Total
		I	II	III	IV	V	
I. Preschool	Preschool (MINEDUC)	30.5	27.6	18.2	16.9	6.8	100.0
	Kindergarten	34.2	33.0	18.7	9.8	4.4	100.0
	Preschool (INTEGRA)	47.0	27.5	17.6	5.7	2.3	100.0
	Total	34.9	29.6	18.2	12.2	5.1	100.0
II. Basic							
	Basic (MINEDUC)	35.8	27.0	18.0	13.5	5.8	100.0
	Basic (PAE)	57.0	21.1	15.0	5.6	1.3	100.0
	School supplies	54.4	26.0	11.7	5.7	2.2	100.0
	School books	38.8	26.9	17.4	12.0	4.8	100.0
	Dental care	42.0	29.5	15.0	9.0	4.6	100.0
	School health	46.3	26.0	15.1	8.3	4.2	100.0
	Total	38.2	26.3	17.6	12.5	5.3	100.0
III. Secondary							
Science/ Humanities	Vouchers	22.1	22.8	21.5	22.6	11.0	100.0
Vocational/ Technical	Vouchers	29.2	25.9	22.3	14.2	8.5	100.0
Vocational/ Technical	Contributions from Firms	29.2	26.8	25.9	13.2	5.0	100.0
	Secondary (PAE)	42.1	26.0	15.2	13.3	3.5	100.0
	Total	26.5	24.7	22.2	17.6	9.1	100.0
IV. Adult							
	Vouchers	19.0	32.5	25.3	18.5	4.7	100.0
V. Higher	Student Aid	6.3	16.3	37.9	20.5	19.0	100.0
Total		34.0	26.1	19.4	14.0	6.5	100.0

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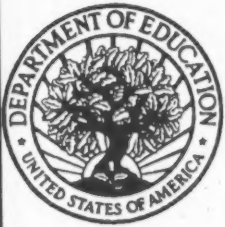
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